

Harvard

MEDICAL
ALUMNI
BULLETIN
Winter, 1965



"The Enjoyment of Health is a Right of All"

To Whom Nothing Human



In the last year of the last century, Grete Lehner Bibring was born in Vienna, Austria. Her father was a successful businessman in that beautiful city; thus Grete was enabled to grow up during the final era of Vienna's great intellectual and social traditions. Long before she received her M.D. degree from the University of Vienna, Dr. Bibring knew she would devote her life to a profession. She was a brilliant student as well as a versatile one, so it was difficult to decide which field of study would be the most satisfying to her — literature, botany, or medicine? But by the time she was ready to enter the University she had made her choice. It was a decision that displayed verve and courage, two qualities which have stayed with her always, for in those days Vienna was still regarded as the greatest medical center in Europe; few women tried to join the ranks of medical men who dominated Viennese and European medicine.

Two new sciences were just beginning to emerge — endocrinology and psychoanalysis; but they were not then a part of the medical school's curriculum. Even so, Dr. Bibring became interested in them and during her free time she became part of a small group of medical students who decided to study those little known sciences in what ever way they could. Among this *avant garde* group was a young man, Edward Bibring, and in 1921, while they were both still medical students, Edward and Grete were married. But before that event Dr. Bibring realized that the new science of psychoanalysis particularly intrigued her as much as it did her husband.

Sigmund Freud had his office in Vienna, and Grete and Edward fre-

Has Been Foreign

quently sought his guidance. It is easy to imagine what an inspiring and stimulating effect such guidance had upon them both; but who could have foreseen the far-reaching effects it was to have on the entire science of psychoanalysis?

From 1921 until 1959 when Edward Bibring died, Grete and he were collaborators in psychoanalytic studies. Independently they each made significant contributions, but together they "created an atmosphere that became known as the Bibring tradition — a dedication to the highest ideals of psychoanalysis and science."

In 1924 there was still no such thing as specialized psychoanalytic training, but Dr. Bibring's work with the informal University group and the fact that she was a physician qualified her to practice the new science as a resident at the Psychiatric Hospital of the University of Vienna.

For the next fourteen years the Bibrings lived and worked in Vienna. Their two sons, George and Thomas, were born there. Those were the great formative years for everyone concerned in psychoanalysis. During that time Dr. Bibring helped to establish the Vienna Psychoanalytic Institute, which became the most influential institute of its kind in the world, and the work done in it formed a strong basis for the future stature of the new science.

In 1924 Dr. Bibring was associate member of the Vienna Psychoanalytic Society and from 1926-1938 she was training analyst and instructor. The contributions of both Grete and Edward Bibring were enormous.

But the world was on the threshold of mighty changes; Hitler was on his rampageous march through Eu-

rope. Austria was invaded and occupied by the Nazi. It was a tense and fearful time for everyone. Dr. Helen H. Tartakoff, instructor in psychiatry and associate psychiatrist at the Beth Israel Hospital, Boston, was among the American candidates working at the Institute with the Bibrings in 1938, and she gives a moving description of Grete Bibring's love of family, home and friends in those dark days:

Our work had been interrupted abruptly (by the Nazi occupation); everyone associated with the Institute was planning his exodus from Austria but, for a period, none of my Viennese friends was permitted to leave. At this time, with the resourcefulness, courage and reality-orientation which have always been characteristic of her, Grete decided to prepare for expatriation by learning to cook. She invited a group of friends to Sunday lunch to partake of her chef d'oeuvre, *Poulet à la bonne femme!* Not only was the lunch excellent but the opportunity to enjoy a quiet family meal, in a city teeming with tensions, left an unforgettable impression. This woman, I decided, was remarkable. She neither lost her equilibrium in the face of grave danger nor relaxed her high standards. Instead she added to her skills, foreseeing the stabilizing effect that contact with her and her husband could have on family and friends during a crisis.

Not long after that memorable luncheon the Bibrings, Freud, and other members of the Vienna Psychoanalytic Institute, moved to England. They continued their work in London for the next three years. Dr. Bibring

practiced, and both she and her husband were appointed to the training staff of the London Psychoanalytic Institute and Clinic. Dr. Edward Bibring also assumed the co-editorship of the revised German editions of Sigmund Freud's collected works because it was learned that the Nazis had destroyed all of Freud's writings.

In 1941, Dr. Edward Bibring was offered a position at Tufts University and so the family moved again. This time they immigrated to America and settled in Boston, Massachusetts.

Now the past was prelude to the future, and they began another new life. After Dr. Bibring had been here a year she was invited to be special lecturer for psychoanalytic psychology at Simmons College. She also had her own private practice. In 1946, she was asked by Dr. Herrman L. Blumgart, physician-in-chief of the Beth Israel Hospital, Boston, to head the hospital's department of psychiatry. Dr. Bibring knew it would be an enormous undertaking, and at first she was hesitant that her inexperience in American hospitals coupled with her previous total involvement in psychoanalysis had not prepared her well enough to handle such a large administrative task. However, she was persuaded that her qualms were groundless.

Dr. Bibring had always been interested in the integration of medicine and psychiatry. It was very important, she felt, for the physician to "blend his medical knowledge with the understanding of the patient's personality and psychological needs." If this could be accomplished, a far "deeper understanding of the sick person and and of his illness" would be achieved.

To this end she organized a new program at the Beth Israel that became known as a psychiatric-medical workshop, and it gradually came to involve physicians and medical students in every department of the hospital. The success of this teaching program through the years is tribute enough to Dr. Bibring's abilities as a scholar and an administrator *extraordinaire*, but at the same time she became interested in a study of the psychoanalytic psychology of pregnancy. She directed a research study and concluded from it that the stresses of modern day living, coupled with the changes and breakdown in family structure, contributed to adverse emotional reactions in many normal women. As a part of the prenatal care program, she suggested that during that "major turning point" in a woman's life, psychologic care might well be offered on a supportive level by obstetricians, nurses, and social workers. In this way she felt the medical staff could "help find adequate ways of bringing psychological patient-care in line with the achievements of today's obstetric care."

In order for such a subject to be thoroughly understood it obviously required medical and psychologic training, but an acceptable solution for improved patient care called for something not learned or observed, but experienced. Dr. Bibring's own private life, her husband, sons, and home were never things apart from her professional life, they were her life, so she was uniquely equipped to find a few "adequate ways" to help other mothers. Her home reflects love, comfortableness and color; it was the Bibring's own oasis and island and it contains only those things they wanted it to contain.

In 1951, Dr. Bibring became assistant professor of psychiatry at the Beth Israel Hospital; then in 1961, she became clinical professor of psychiatry of the Faculty of Medicine, Harvard University; she was the first

woman to be chosen for this post. The following year she became president of the American Psychoanalytic Association.

Shortly after she became professor of psychiatry, the medical service of Beth Israel Hospital invited Dr. Bibring to address them. Dr. Blumgart recalls her graceful and witty response to the invitation, when she began by saying she hoped they would be understanding of her because she knew medicine was an *exact* science. Physicians could *always* make an accurate diagnosis of their patients. They always *knew* what was wrong and could then proceed to treat them successfully. Unlike the infallible internists, this was not the case with psychiatrists; although they often *knew* what was wrong with their patients they were not *always* able to treat them successfully.

Dr. Bibring has often been told, in one way or another, that she is "charming and full of commonsense." The description amuses her. Perhaps she is reminded of the time when her son, who was then quite young, had a very close boy friend whose own mother was the epitome of "Dresden china" motherliness; Dr. Bibring was vigorously brushing her dark hair and her son, standing behind her watching, suddenly said: "You don't look like other mothers — but you have charm."

To say she is "full of commonsense" is to greatly over-simplify her extraordinary sensitivity to any and all situations; it diminishes her vast knowledge and experience because it is that which enables her to express simple sounding solutions to intricate problems. It is naive to attribute such a rare ability to commonsense; it is more likely the stamp of greatness, and it has been her gift to all those she teaches. Dr. Blumgart once said: "... She has the ability to tell people about things they do not know in such a way that they are not aware of their

lack; indeed, they feel they are participating in a discussion or conversation. It is only afterwards that the import of her message occurs to them and they realize she has explained something to them they had not previously known."

This year Dr. Bibring becomes clinical professor of psychiatry *emeritus*, she will also retire as psychiatrist-in-chief and director of research at the Beth Israel Hospital. At a dinner given by the Beth Israel last November, at which Dr. Bibring was a guest of honor, Dr. Berry said:

When a great physician-teacher-scholar retires, Emerson explained that people are wont '... to explore the horizon for a successor; but none comes and none will.' ... Because of its nature psychiatry has often been misunderstood by other members of the medical profession. As a consequence, psychiatrists have frequently had to function apart from their medical colleagues, and their patients have had to be cared for in separate hospitals. Dr. Bibring has brought psychiatry into the main stream of medicine ... Man is now being dealt with as a living whole in constant interaction with his environment. Even as psychiatry must inevitably move closer to medicine and medical science through embracing molecular biology, so must medicine move closer to psychiatry through comprehending the psychogenic factors in disease. Together, they must both come to understand man as a social being.

Dr. Bibring's whole life shows she has innately understood this. And as her friend, Helen Tartakoff also said, "here is a woman to whom nothing human has been foreign; therefore, she has been eminently well equipped to understand others."

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Cover: The origin of the quotation is the preamble of the constitution of WHO, which is quoted in the article "The International Responsibility of Medicine" by Dr. Dimitri Venediktov, on p. 12. Dr. Venediktov is counselor and adviser to the USSR Permanent Mission to the United Nations.

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The opinions of contributors to the Bulletin do not necessarily reflect those of the Editorial Staff.

LETTERS

Non Aequanimitas

To the Editor:

As a former chairman of the committee on medical defense of the Massachusetts Medical Society and as secretary of the Board of Registration in Medicine, I suspect that I read with more than average interest two articles in the Fall 1964, *Harvard Medical Alumni Bulletin*, "Are Doctors Ignoring The Law?" and the accompanying editorial "We Agree With Much Of What He Says." The latter is a laudably dispassionate and pertinent review of the critique and the problem. However, both presentations failed to mention some obvious factors which make plaintiffs' attorneys in professional liability litigation something less than "bosom buddies" of physicians and make such suits facts of life which physicians find it difficult to contemplate with *aequanimitas*.

The first of these is the nature of the judicial process itself, the adversary method of arriving at decisions and judgments. Although I am not suggesting abandonment of this method — I know it is often not understood by the average physician, that it is alien to his training in the handling of controversial matters, that it almost necessarily breeds animosity and acrimony, that it lends itself to possible unscrupulousness, theatrical exaggeration, ridicule, "badgering," innuendo, and purposeful confusion.

The second is that anybody can sue a physician (or anybody else) alleging anything at all, regardless of the presence or absence of any basis in fact for the suit and (a) that the mere filing of such a suit actually does, whether it should or not, sully the physician's personal and/or professional reputation, that indispensable asset. (b) Any individual can sue with little or no cost to himself because an attorney may accept such

a case on a contingency basis (a fee if he wins, no fee if he loses). (c) Even when the case has no merit, an insurance company or the defendant's attorney may urge settlement of this "nuisance suit" for the simple reason that a modest settlement will be cheaper than defense of the suit in court. In a certain instance it was alleged that the court urged the physician's attorney to suggest to his physician client that he abandon his stiff-necked righteous indignation and settle rather than clutter up the courts.

Akin to the nuisance case problem is the well known practice of entering suit against every person involved in the treatment of a patient, to have one party to "save his own neck" testify to the detriment of another party to the same suit — an ingenious way of arriving at "the truth" but not a practice to endear attorneys to physicians.

This brings me to the "conspiracy of silence," to the allegation that a "doctor will not testify against his brother." This implies that the physician should be more willing to testify against a friend, associate or professional counterpart than should others. This I cannot accept, but I must remind attorneys that doctors are subject to the same laws as are all other witnesses. They may be summoned by order of the court, they may be examined and cross-examined, they may be held in contempt of court, they may be subject to citation for perjury. If the case and/or the attorney's preparation thereof are such that proper and sufficient facts cannot be established to substantiate the allegations, the witness is not at fault and is under no obligation, and should not try, to volunteer the necessary information, even if he is aware of any. However, unless the doctor is a willing expert witness, entitled to an equitable fee for the time and effort involved, he cannot be asked to give opinions, he cannot be asked hypothetical questions. Furthermore, the physician has the right, though he often does not know or forgets this, to appeal to the court, either directly

or through counsel, when not sure of his limits, rights and privileges.

In regard to opinions: first an unbiased expert witness is practically non-existent in medicine. Not infrequently authors of recent journal presentations and/or medical school faculty members are sought as expert witnesses and, as any older practitioner well knows, these often are the most biased of all experts. Medicine is not yet an exact science, much of modern therapy or so-called miracle medicine is still highly controversial, and what one conscientious expert may think is an indefensible omission may well be simple prudent caution in the opinion of another. It is in this area that the defendant doctor frequently is victimized by clever (or inept) counsel, or even by his own lack of realization of the controversial nature of the present practice of medicine. Textbook testimony has the same fallibility. "Textbooks are ten years behind the journals and practice is twenty years behind the textbooks," or some variant of this quotation, was commonly cited during my medical school days. There is both truth and falsehood in it, but it should make one pause for thought. Authorship of a book or any other publication should not and does not *ipso facto* endow the writer with omniscience.

Just one more point. After a jury has established supposedly just and fair damages for the plaintiff on the basis of expert testimony, the attorney makes mockery of the justness and fairness of the verdict by appropriating 30%-50% of the settlement as his fee. This is scarcely conducive to warm affection between attorney and defendant physician, even when or especially when the attorney may have to split his fee with the professional brother who referred this case to him. (Split fees and contingency fees are unethical for physicians but not for attorneys, even though some may frown upon them.)

In regard to the title of Attorney Goldnan's presentation, I fail to see its relevance to the subject matter. No evidence is presented that doctors

are attempting to or are ignoring or evading the law or that they are being ignored or evaded by it. Nor do the quotations from Drs. Willard Shabat, and Joseph F. Sadusk, Jr., justify the paranoia of the opening paragraph. Naturally, this leads to the obvious question, "Why or Whence the Paranoia?"

DAVID W. WALLWORK '30
North Andover, Mass.

Apologia

To the Editor:

In Table 6, on page 34 of the Fall, 1964, issue, I regret that I failed to list, among distinguished B.C.H. (and in this instance also Harvard Medical Unit at B.C.H.) alumni who became heads of other H.M.S. departments, Dr. Thomas B. Fitzpatrick '45, who is now at MGH and head of Harvard's department of dermatology.

My apologies for this oversight.

MAXWELL FINLAND '26
George Richards Minot Professor
of Medicine and Head of the
Department of Medicine at the
Boston City Hospital

The Fourth Dimension

To the Editor:

We are indebted to Mr. Harold J. Berman for the enlightened ideas expressed in his recent article, "The Language of Law." I would like to comment briefly on one or two issues he has raised.

In my mind, the words "language" and "communication" are not synonymous. Mr. Berman defines the former quite lucidly. The latter, I suggest, is broader in scope, includes language as its present, most important component, and envisages the future refinement of many hitherto primitively developed means of meaning-transfer between individuals.

We must assume two fundamental premises about modern language.

The first, as Mr. Berman has correctly inferred, is that uniformity of language alone will not unify mankind. All history confirms this observation. True unity of mankind can be achieved only by re-spiritualizing the human heart, as a religious process. However, uniformity of language will facilitate that end by helping to eradicate prejudice and as such is a worthy goal.

The second premise is that inherent poverty and imperfection are evident in our modern languages, even in one as expressive as English. The plethora of cases in our courts, particularly in the fields of contract and domestic relations, testifies to our inability, despite redundant attempts to the contrary, to eliminate ambiguity and equivocation from our communications. The word "semantics" has become popular in discussion groups to explain difficulty in understanding one another's speech. Clearly, the human mind has outrun its language.

If we consider the "speak-listen" process as a two-dimensional function basic to interpersonal communication, I would like to suggest a third-dimensional function called "look." One's bearing, the expression of one's face and eyes, and one's tone of voice are just as important as the words we use. It is well known that our spoken meaning can be negated by a contrary "look" meaning. On the other hand, a compatible "speak-listen-look" message can be communicative to a highly effective degree.

To the third-dimension, may I now add a fourth? Called "project," this creates the epitome of direct human communication, a "speak-listen-look-project" technique in which the communicator contemplates, in addition to the three basic functions, the conscious, intentional projection of positive feelings towards the communicant, particularly love and goodwill and the active suppression of such negative feelings as intolerance, impatience, or hostility. The atmosphere thus generated becomes even more articulate than the spoken word.

This method, which can and

should be practiced by all physicians, enormously enriches the doctor-patient relationship, fosters greater loyalty and cooperation in the patient, and gives direction and purpose to one's practice. At this level lie horizons of vast, unexplored, undreamt-of refinements and perfections of human communications which could evolve into a universal language, instantly expressible and free of ambiguity and equivocation. This communication would not be derived from one of our existing languages but would be as different from our present language as our own is from the caveman's. When spiritualization is ultimately effected, this unity in language, utilizing all four dimensions, will be a first by-product.

ELMER V. KENNEALLY, '43B
Greenfield, Mass.

The Long Decline

To the Editor:

I was amused and interested in the article by Dr. Paul J. Davis in your Christmas number, entitled "Decline and Fall of the Female Arch." In it he stated that the increase in size of the female foot has occurred over the past three decades. Indeed it has been going on for longer than that. In a letter to *Lancet* in 1932 I said the following:

In a demonstration of genuine period clothes dating from 1780 recently arranged in Bristol, it was found that none of the ladies taking part could put on the shoes corresponding to the earlier costumes, as they were much too small. Is the fact the women's feet were so much smaller 100 years ago well recognised? If it were so, I suppose exercise and a healthier life have been responsible for the change.

My letter was commented on in the popular press in England, who stigmatised me as being ungallant to the fair sex!

JAMES T. IRVING
Professor of Physiology,
Forsyth Dental Center

1815 Vaccination

24 May *by assistant* Mr. John Stewart, mother his son was vaccinated from the arm of his sister, who was vaccinated by Dr. Stewart of Albany, taken once, did well

25 May *by assistant* Mr. John Stewart's youngest son was vaccinated from his daughter, taken and did well

26 May *by assistant* Mr. and Joseph Willard's son Peter Hill was vaccinated from Mr. Stewart's daughter, taken and did well

1 June *by child* Mr. John Cackles' daughter Evelina was vaccinated from Peter Hill Willard, taken, and did well.

7 June *by child* James Scoby, was vaccinated from Evelina Cackles, taken and did well

14 June *by assistant* Mrs. Tillet's child vaccinated from James, taken and did well

Vaccination by L. Spalding, M.D.

1817

17 April Mr. Brackell was his son Will. 24
17 April Linn was vaccinated from said child, mother taken and did well.

17 April Rev. J. Alders daughter Josephine 27
was vaccinated from said mother, taken, and did well.

6 October Mr. Tupperman, in Mr. Brackell's 28
office vaccinated, from said mother, taken and did well

6 October Mr. Luther Clark, in Mr. Brackell's 1
office was vaccinated from the said child, taken and did well

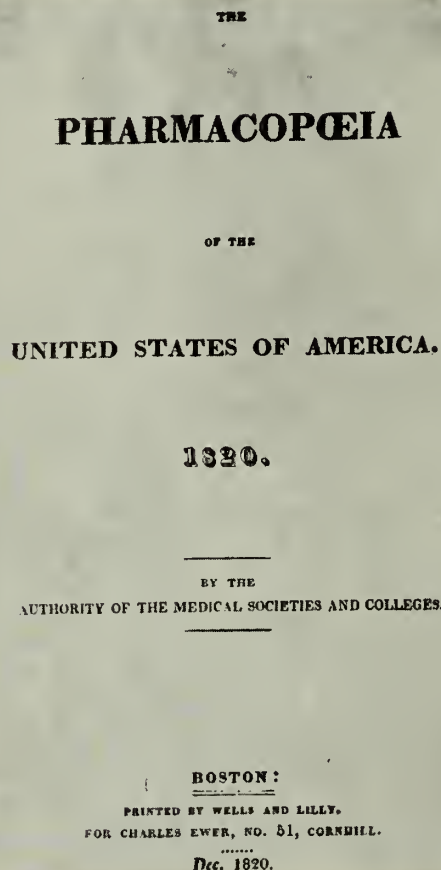
14 October Rev. Joseph Willard's son Joseph 7
Augustus was vaccinated, with matter from Mr. Clark, taken and did well.

Along the Perimeter

The Collection of a

Compleat Physician

Even in its first years we can say that the Medical School was an educator of educators, for living proof of this lies in the Library's recent gift of the collection of the writings of Lyman Spalding, class of 1797. And in the sense that a medical 'educator' is one who elevates both the theory and practice of medicine, Lyman Spalding fulfilled Harvard's traditional requirement that its Alumni have very versatile careers. His writings, which have been collected and donated to the Medical School by his great-granddaughter Mrs. Dorothy F. Stewart, reveal a short, 23-year career that managed to embrace preventive medicine, medical education, public health, and scholarship. They have been painstakingly gathered from the attics and desks of his descendants.



In 1800, while Dr. Spalding was teaching in the first chemical lecture-ship at Dartmouth Medical College, he began inoculating his patients with some of the first "threads dipped in pure (smallpox) vaccine infection" administered in America. Sent to him by Dr. Benjamin Waterhouse, first professor of the theory and practice of physic at the Medical School, the threads had originally come from Dr. Edward Jenner himself. Dr. Waterhouse was responsible for introducing the vaccination to the New World, an obligation which he fulfilled "under the impression of effecting a public benefit and conceiving it a duty in my official situation in this University." Dr. Holmes describes Dr. Waterhouse as "a brisk, dapper old gentleman, with hair tied in a ribbon behind, and I think, powdered, marching smartly about with his gold-headed cane, with a look of questioning sagacity and an utterance of oracular gravity." He must have greatly influenced his former student, because Dr. Spalding became so enthusiastic about assisting him in the interests of smallpox inoculation that he resigned from Dartmouth to work on the project full time. He also managed to make his first foray into improving the administration of the nation's public health in that decade, by compiling one of the earliest "Bills of Mortality." This recorded the number and causes of deaths in the Portsmouth, New Hampshire area annually.

Not long after Dr. Spalding was asked to become president of the new College of Physicians and Surgeons of the Western District in Fairfield, N.Y. He began this job in 1813, but a salary dispute in 1817 brought it to a short end. At his inaugural address he describes the ideal future physician as a "gentleman (who), before he begins the study of medicine, should be well instructed in all of the liberal arts and sciences."

His most important contribution to early American medicine was the *Pharmacopoeia of the United States of America*. In 1817 he proposed its compilation to the meeting of the New York County Medical Society;

and with the "authority of the medical societies and colleges" of America, he organized and published the *Pharmacopoeia* from data assembled by the nation's northern, southern, western, and middle regions. He completed this in 1820, and one year later he died rather ignominiously, as a result of a head blow from falling rubbish while he was walking along Pearl Street in New York.

Kate Macy Ladd Professorship Goes to Dr. Reid

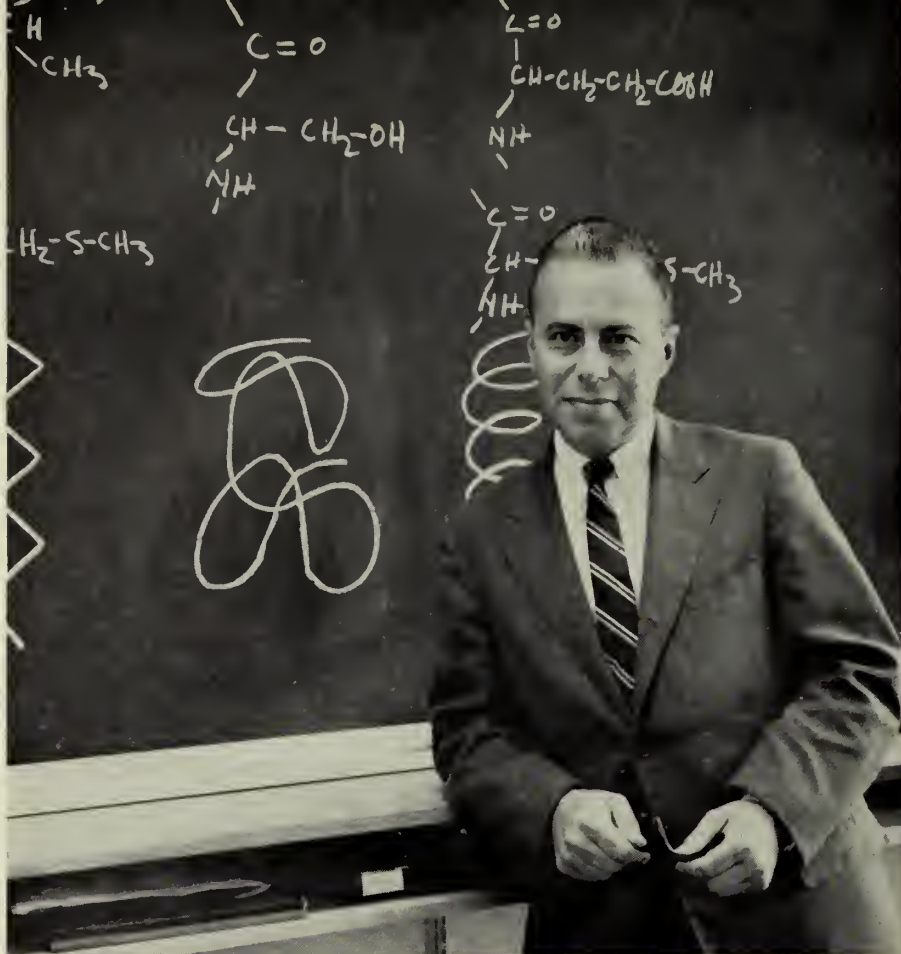
Duncan E. Reid, who continues to serve as William Lambert Richardson Professor of Obstetrics and Gynecology, head of the School's department of obstetrics and gynecology, and chief of staff at the Boston Lying-in

Hospital, is the first to hold this new professorship. He has been associated with the Medical School since 1935. Established by Harvard early in 1964 by means of a \$500,000 gift from the Josiah Macy, Jr., Foundation of New York, the chair honors Mrs. Kate Macy Ladd, founder of the Foundation.

Through his concentration on the medical complications in pregnancy and the biology of reproduction, Dr. Reid has significantly upgraded obstetrical care. His *Textbook of Obstetrics*, 1962, for students in advanced obstetrical training is valued by colleagues all over the world, and its dedication to "those who work together for the initial right of man to be born without handicap and the privilege of woman to bear without injury" is a statement of Dr. Reid's own professional goals. He has managed to meet them personally with his studies of hypertension and coagulation defects in pregnant women, which have appeared in over 100 publications.

Dr. Reid





Dr. Blout

Dr. Blout Edward S. Harkness Professor of Biological Chemistry

This professorship is one of two chairs established in the faculty of medicine in mid-1964 after the receipt of \$1 million from The Commonwealth Fund. It honors the late founder of this Fund, which supports medicine and education. Dr. Blout has been professor of biological chemistry at the Medical School since 1962.

A man who has straddled the fields of industry and medical education in his career, Dr. Elkan R. Blout's concern is with the elucidation of the shape of protein molecules and synthetic polypeptides. Vice President and general manager of research at Polaroid Corporation until he was appointed professor, he distinguished himself by simultaneously directing a broad area of industrial research and making basic investigations in the application of advanced physical tools to problems of macromolecular structure that were of biological interest.

Postgraduate Education

That physicians should continue their education is generally accepted as an axiom, but the implementation of effective programs for such education is at best fragmentary. Medical schools devote themselves to revising undergraduate curricula, raising money for education, and research, and at Harvard most graduates have access to instruction at its hospitals.

Those who do not, however, may benefit from the activities of the Postgraduate Medical Institute of 22 The Fenway, Boston. Founded 11 years ago under the sponsorship of the Massachusetts Medical Society in collaboration with other organizations concerned with physician education in the state, the Institute has tried to plan its teaching programs from a professional viewpoint, realizing that the requirements of physicians differed from those of undergraduates and were not being met by the helterskelter attempts at teaching sessions in various hospitals.

To date the Institute's consultants have helped plan and provide teachers

for 28 programs in Massachusetts hospitals. It has collaborated with the Bingham Associates to create television medical clinics which are broadcast weekly over WGBH-Channel 2 and other educational stations. Telephonic hook-up with these clinics and a series of hospitals enables doctors to view the telecast, telephone their questions immediately to the panelists, and receive their answers over the television network or FM radio stations. The Institute has also conducted an evaluation study of postgraduate education.

Most recently it has offered itself as a focus for a new collaborative effort with the numerous regional, specialist medical societies. Thus in November the idea was discussed at a dinner meeting with representatives of the Cancer, Dermatological, Diabetic, Epileptic, Heart, Medicolegal, Obstetrical and Gynecological, Ophthalmological, Otolaryngological, Pediatric, Physical Medicine, Psychiatric, Rheumatism, Surgical, Thoracic, and Urological Societies. At present the lack of coordination of the programs of these societies results in a discouraging waste of both programs and distinguished speakers who come long distances and speak briefly to limited groups. Through this collaboration the Institute hopes to eliminate this problem as well as tap the heretofore unused resources in these societies for planning and executing present and future community hospital teaching programs. It also hopes to help some of the societies by setting up a secretarial pool to handle their correspondence. The idea was unanimously accepted by those at the meeting, and the Institute invites inquiries from any other regional societies interested in joining in this pioneer effort.

Why, Where, and How?

"Only if hospitals know in detail about the people and the community they serve, can they plan wisely for the future." This was said by David D. Rutstein '34, professor of preventive medicine and head of the department at Harvard, when he announced a new

unit, to be directed by his department, but conducted in the Massachusetts General Hospital. The unit will be involved in a new kind of preventive medicine quest: it will try to assess the problems relating to the public's ill health. Why are patients being admitted to the hospital? What are the clinical reasons for them being there? If certain preventive techniques had been used would they have obviated hospitalization? What regard do patients take of known preventive techniques? Once the patient has been seen, would physicians have been able to prevent the complications of the disease by any known means? In fact, the study intends to give thorough consideration to — and in time, through the use of IBM data processing, an analysis of — such variables as the medical, economic, environmental, social, emotional, and occupational aspects of all the patients admitted to the hospital.

Victor W. Sidel '57, associate in preventive medicine and assistant in medicine at the MGH, will be in charge of the general medical aspects of the new unit. And David C. Poskanzer '54, assistant professor of preventive medicine and assistant neurologist at the MGH, will administrate the neurological aspects.

The unit will also make a simultaneous study of specific medical problems both within the hospital and in the community served by the hospital. Such an investigation could not be conducted separately in either the hospital alone or the isolated community. For example, environmental factors in the occurrence of leukemia can only be studied effectively by a highly specialized hospital unit that works closely with epidemiological field workers in the population served by the hospital.

As the Massachusetts General Hospital is one of Harvard's seven Associated Teaching Hospitals, it is possible for the new preventive medicine unit to work closely with all of their clinical services. This phase of the program has been developed collaboratively by Dr. Rutstein and Dr. Robert

H. Ebert, Jackson Professor of Clinical Medicine and head of Harvard's department of medicine at the MGH where he is also chief of the medical service.

This data will enable teaching about preventive medicine to be given at the bedside to both medical students and those at the postdoctoral level. Hopefully, the unit will arm tomorrow's medical students with increased knowledge of epidemiological principles, social factors in illness, environmental hazards, and familial illnesses.

Samuel A. Levine Honored at the PBBH

It is only right that the name of one of the first physicians in this country to diagnose and describe acute coronary thrombosis should be put to one of medicine's newer lifeguards against heart failure. The Samuel A. Levine Coronary Monitoring Center that the Peter Bent Brigham Hospital dedicated this month will subtract at least a few from the nation's annual 450,000 death toll from coronary occlusion.

This new unit is unique in that it accommodates four patients at one time. Because over half the deaths from heart failure occur within 24 hours after the attack, and electrical instability of the heart has come to be considered the prime cause of such deaths, the Center's electronic system is designed to enable intensive, continuous observation of acute heart attack patients during their first 72 hours of illness. The physician can therefore reach the patient's bedside for resuscitation within three minutes of cardiac catastrophe. The success of its operation depends on the vigilance of a highly trained nursing staff that interprets signals continuously emitted on an oscilloscope programmed to show any change in heart rhythm.

As Henry Adams said, "A teacher affects eternity; he can never tell where his influence stops." Perhaps Samuel A. Levine '14, clinical professor of medicine, emeritus, will live to see the monitor further his researches and unlock a new era in hospital care.

Although the Samuel A. Levine Coronary Monitoring Center is only one of a few of its kind now set up, it will double as a laboratory for testing the various biologic and physiologic transducers necessary to the successful monitoring of all kinds of acutely ill patients. Perhaps some day all acutely ill patients in every sizeable hospital in the country will be monitored. Future centers like Dr. Levine's at least will become household equipment for most large hospitals, and Dr. Levine's studies in cardiology — his "chair rest" cure, digitalis therapy, and his practical use of the stethoscope and electrocardiograph — have helped to pave this progress. As he has said of his own teaching, "Somehow I may have the knack of dispelling the mists of insufficient understanding. Much of my teaching has been put across because I begin at the beginning of each subject and use simple fundamentals to build strong foundations."

To Each According To His Needs

Infants and children of medically indigent families often suffer from getting only "fragmented care." Now a "demonstration project" has been designed to change this situation for families served by the Beth Israel Hospital. Robert B. Berg '52, assistant professor of pediatrics and pediatrician-in-chief at the B.I., is director of the program. "Our objective," said Dr. Berg, "is to demonstrate that the full resources of the general, voluntary hospital can be marshalled to aid the community by improving the health and well-being of infants and children in that portion of the population that cannot afford private medical care. Typically, children in such families now get piecemeal service on a piecemeal basis."

Care is given at the lowest possible cost. Some ninety families including about 270 children are now involved in the program. Each child is assigned to either Dr. Berg or his assistant, Irving Silverman, associate visiting pediatrician at Beth Israel.

Both doctors are on 24-hour call and are available at any time for phone consultation. House calls are made as required and when hospitalization is necessary, all the resources of the hospital are available to the patient.

The demonstration project grew out of the changing nature of pediatric practice and Dr. Berg's observations and experience in the hospital-centered programs providing home care for the medically indigent. One of the questions to be resolved is the number of families that one pediatrician can serve when fully supported by all the hospital facilities. The project is being financed by a three-year grant from the Permanent Charities Foundation of Boston.

Noise Begets Noise

The poet Robert Lowell once said that if we were to go back to the 18th century we would be smitten by their ghastly odors, but if our Restoration ancestors were to come into our century they would die of fright from our noise.

Naturally, no hospital wants its patients to be frightened to death by noise, or even become aggravated by it. When Beth Israel hospital began to receive a large number of complaints from their patients about hospital noise, they initiated a thorough study of the problem through their public relations division. It was responsible for finding out where the noises came from, why, and how to make them less. To achieve this they made extensive use of a decibel meter, which stimulated the interest and cooperation of the hospital personnel and was useful in interpreting the problem as a whole. The results were reported to the department heads and recommendations were made.

It seemed that noise begot more noise, and it was both the human and mechanical factors that helped make it excessively loud. Sounds usually taken for granted, such as noisy carts, slamming refrigerator doors, screeching of curtain rings, noisy TV and radio sets, loud talk by physicians,

nurses, and visitors all aggravated the situation and irritated the patients.

A new administrative regulation regarding visiting hours and the anti-noise procedures was then printed and distributed to visitors, employees, physicians, house officers, and patients. A large sign was prominently displayed in the lobby announcing the purposes, rules, and benefits of the program; posters were put up in key areas; specialized folders appealed to each major segment of the hospital and made particular and relevant suggestions on how each different group could cooperate.

Beth Israel Hospital is pleased with the plan because although the noise problem has not been eliminated, there has been a definite and measurable improvement.

Program Notes

The Alumni phase of the Program for Harvard Medicine has reached \$2,750,000 of its goal of \$3,500,000. Claude E. Forkner '26, national alumni chairman, reported that this is the largest amount ever contributed to a capital funds campaign by alumni of a medical school. Two major gifts from Alumni and their families helped bring the Alumni to within 78 per cent of their goal. One of the gifts was an unrestricted grant of \$100,000 from R. Walter Graham, Jr. '28, of Baltimore, Maryland.

Dr. Graham has served actively as a member of the Program for Harvard Medicine's National Committee since 1961. In making his gift, Dr. Graham told Dr. Berry: "Frankly, I have always felt rather indebted to Harvard for the opportunity I had to study there. Even though I no longer practice medicine, I have felt for a long time that I would like to do something concrete to express my appreciation." Dr. Berry said, "I am particularly grateful to Dr. Graham, not only for his significant gift, but for the enthusiastic personal support he has given to the School and to the

Program's General Chairman Ridley Watts."

Dr. Graham practiced surgery in Baltimore from 1934 to 1953, interrupted by four and a half years of service with the Army Medical Corps in World War II. He was medical director of Blue Cross-Blue Shield from 1953 to 1955 and subsequently served two four-year terms as comptroller of the City of Baltimore. He also has been a director of the New York Central Railroad Company since 1954.

In mid-January the Program's overall total was \$45 million of its \$58 million goal. Among the major new gifts recently received were unrestricted grants of \$50,000 each from Sterling Drug, Inc., and the Reader's Digest Association. The Independence Foundation of Philadelphia also gave \$100,000 for medical research in areas to be selected at the discretion of the Dean.

INSIDE HMS:

March of the Toy Doctors

Troubled by the persistent nightmare that Medicine is just a passing fancy of our affluent times, an enterprising crew of Vanderbilt Hall residents is collecting the ingredients for a time capsule — to be exhumed some time after the turn of the next century. The memorabilia are to serve as inspiration as well as footnotes for future historians, and the going has been accordingly rough. But the committee in charge of burial is quite certain that at least three items will be included in the bundle. Each of these is a brief unexpurgated film clipping of life in Harvard's own student enclosure, and they all promise to be milestones in the history of technicolor Medicine.

In their proper order, the shorts compress the 24 recreational hours of an HMS I Saturday into 253 minutes

of gripping drama. The epic achievement was not accomplished without assistance, of course, and outside help had to be sought in such matters as photography, musical score, scenario and deep thinking. Joseph E. Levene, the noted craftsman of the silver screen who has already thrilled moviegoers with *The Third-year Male Nurses* and *The Post-doctoral Dental Research Fellows*, has a true understanding of the healing arts and has made his entire staff available. As a result the credits include: script by Frank G. Slaughter; symphonic backdrop by Lukas Foss, composed clairvoyantly before hearing the plot, and highlighted by his "Haptene Quartet" and the cyclotronic "Adagio and Arsenate for Strings and Brass"; and superb dubbing from the original Italian by the noted linguist, Miss Tuesday Weld.

The first episode has one hundred well-groomed students bolting a nourishing breakfast of Rice Krispies, cranberry-pineapple-papaya juice, and crashed eggs. Ten students are still asleep, as if in anticipation of the morning's clinic. Even the latter stir, however, when the dining hall doors yield to the firm straight-arm of the class's scholar-athlete. Into the subterranean mess hall pour this seemly young man and his entourage of short, fat admirers. He is brandishing a long cigarette — no filter — and seems to be taunting that number of his fellows who are trying to kick the habit. A comely wench is draped over his throwing arm and as they make their way through envious glances to the cashier's desk, one hundred laden forks hover between plate and gaping mouth. Many of those utensils never reach their destination, many are rendered useless forevermore as their wielders crush them slowly into gnarled, pocket-sized sculptures. Even after all are seated and dining, a few sobs are heard. The class pace-maker looks at his watch and rises. All the rest follow. And as the hall empties to the wails of "... sit in back ... I just know he'll call on me today ...", the little women in white begin to sweep

away the debris, carefully avoiding the legs of the ten sleepers and a brace of intellectuals fighting for the *Times* crossword puzzle.

Our second vignette stars one of Producer Levene's most redoubtable mummies, Mr. Rip Torn, and the versatile actor has free rein to display his innumerable talents. One of that rare breed of "total students", he is rooted to his chair amidst the spartan simplicity of his fifth floor Vanderbilt garret. Absorbed in his *Gray's* after a traumatic morning in the Brigham pit, he has forgotten to eat lunch and is presently munching on a threadbare cauliflower and sipping from a bottle of warm Tab. This film strip runs almost three hours, but med student Torn never once looks up from his labor. Busily memorizing obscure details with which to unnerve his Anatomy partners, he is overheard mumbling, "... ovula Nabothi; Wrisberg's ganglion; Burdach's tract; Wirsungi's duct, ha, that'll kill 'em. . ." His lugubrious revelry is punctuated now and again with curt *Banzais* as he uncovers still another baffling synonym for a familiar structure. A classmate knocks on his door. Will he be a fourth at bridge? Not to be tricked away from his books, he replies that he is too busy reading a James Bond saga and has to get to bed early anyway.

The film-makers eloquently make the point that there is one thought that sustains him through his travails — Home. For, as Mr. Torn's grind plunges him through the supper hour and into the night, he absent-mindedly glances at the verdant tresses of the favorite philodendron on his desk: at once the plant becomes the face of his mother and he is gazing at her graying locks. Wiping away the tears born of long separation, he muffles a cry and leaps to his feet. Teetering momentarily on the brink of vaso-vagal syncope, he flashes to the phone and direct-dials his way through a dozen ciphers. The distant ring seems interminable, and then, "Hello, Mother, this is your son, the Doctor." As the audience is empathizing with this poignant

insight into the medical student's abiding humanity, a large Gordon Linen towel drapes itself slowly over the entire scene.

The final tableau unfolds in the misty depths of the Vanderbilt gymnasium, where a small group of scantily clad meds engages in its special form of athletic toil. While the raucous laughter and music of Saturday evening parties rage on upstairs, they are chanting monotonously below "No more, let me out" as they lilt through a variety of isometric pirouettes; "I hate Anatomy, Biochemistry, and Physiology, but mostly Anatomy," they begin to shriek as they switch over to heaving barbells at open windows; "I'm going to throttle my section man," they echo in chorus, straining their neck muscles with their bellows.

One of them breaks away and begins to romp aimlessly about the basketball court; trying to scale the walls, he fails and begins to whimper. Undaunted at not being able to crawl his way to the ceiling, he begins another mysterious ritual. He stands about a foot from the wall and methodically rears back his head to dash it against the varnished boards. In the meanwhile, the rest of the group shouts something about burning the library and sallies forth to the mission. Now alone in the far corner of the gym, our more rambunctious and imaginative friend is trying to separate *mens sana* from *corpore sano* in still another ingenious way. As the burning library in the background etches his figure in blazing orange, he begins to hurl himself at the backboard of the basket. A herculean launching carries him through the cords for a perfect two-pointer.

The time-capsule project has been enthusiastically underwritten by the AMA, and the films will shortly start their journey to tomorrow. Those of you who want to be around for the ceremony had best keep a lookout for the announcement by the *NEJM*; the day of their interment is not far off.

JAMES B. KAHN '67

The INTERNATIONAL RESPONSIBILITY of MEDICINE

by **Dimitri D. Venediktov, M. D.**

Some cities are known not only for their modern skyscrapers or historical landmarks but also for their distinctive cultural, scientific and humanitarian traditions. Boston is obviously such a place. That is why even a short visit to its famous hospitals and medical centers was so interesting and impressive for my wife and me. We spent four days in various departments and laboratories of the Harvard and Tufts Medical Schools, learning about the experimental and clinical research being done in those institutions and exchanging views with our American friends on medical practice, science, and education. And, as so often happens when people of different countries meet, we discussed the problems of peace, international understanding, and our personal role as physicians in this complex and rapidly changing world.

There are a few basic facts today that determine and influence our lives and thinking, no matter from which country or what political system one comes:

- Although the earth is a vast place, it has become too small for waging wars. While only an eighth of the earth's arable land has been cultivated and two-thirds of the people engaged in agriculture are still working with mattocks and wooden ploughs, it takes only an hour for a missile to go around the world, and only an instant for radio to bring us news from other nations. We have all really become close neighbors.

- The technical and social progress of all the nations of the world is increasing with every decade.

Dr. Venediktov is senior research associate of the Institute of Clinical and Experimental Surgery in Moscow, and counselor and adviser to the USSR Permanent Mission to the United Nations in New York. This article is a shortened version of a public lecture given on October 20, 1964, in Boston, which was sponsored by the Physicians for Social Responsibility.





• Modern thermonuclear warfare, as well as the deadly development of chemical and biological weapons, would make a future war, if it ever breaks out, inevitably fatal for many countries and disastrous to the whole of humanity. Bertrand Russell has said that the stock of thermonuclear bombs accumulated by the Great Powers is already so big that in order to use it up it would be necessary to blast one bomb, which would equal the total amount of explosives used in World War II, every day for the next 146 years. Such "overkill capacity" is also futile protection, since it is quite enough to be killed once. The only way out is disarmament, development of mutual understanding between nations and peoples, and the peaceful co-existence of countries with different political, economic, and social structures. This is not a mere desire, but seems to be the only alternative to mutual annihilation. Unfortunately, the international negotiations on complete and total disarmament are progressing very slowly from one deadlock to another. The forces in the world who do not agree there should be an end to the arms race and no more wars do not understand the significant changes that have taken place in the modern world. They vainly hope to stop such change by means of force.

Some people may say, "Well, that is all true, but it is politics, and politics is the business of politicians, diplomats, and generals. As doctors we are so busy trying to treat our patients that some of us might ask, why not be content to limit ourselves to our professional practice and leave the world's problems to be solved by others?" To answer such a question one simply needs to remember that a physician can never *be* free or *feel* free of obligations and responsibilities to the society in which he lives. The ancient Hippocratic code of ethics demands that he place duty to his patients, to other physicians and to society above his personal interests and desires. The history of world medicine gives us many examples of dedicated physicians who have done this.

On the other hand history has also shown us that medical diplomas themselves are no guarantee against the physician's involvement in crimes of a militaristic nature. The world will not forget the murderers with medical degrees who worked in the Nazi concentration camps. We cannot help thinking of the many scientists and specialists who are *still* planning and preparing thermonuclear and biological warfare. The disastrous effects from such a world war, which have been described in a series of articles in the *New England Journal** and in "The Fallen Sky" by Drs. Saul Aronow, Frank R. Ervin and Victor W. Sidel, could only be surpassed by the terrible reality of thermonuclear war itself. In May, 1962, the General Assembly of the World Health Organization adopted a special resolution on the role of physicians in the preservation and promotion of peace:

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... being aware of the close relationship which exists between health and the preservation of peace . . . Considering that continuing progress in the improvement of world health will contribute importantly to peace, as well as that peace is a basic condition for the preservation and improvement of the health of people in the whole world . . . physicians and all other medical workers have—in the exercise of their profession and through the relief and help they give to their patients—an important role to play in the preservation and promotion of peace, by contributing to the elimination or at least the attenuation of the causes of distress and dissatisfaction . . .

It is this important knowledge that has convinced physicians in the Soviet Union that they cannot remain indifferent before the dangers of a new war, and we believe that this point of view is shared by physicians in other countries.

I feel the medical profession can make very important contributions to the improvement of international relations by meeting responsibilities to itself, its nation, the world and all humanity. As physicians we know better than anybody else the tremendous progress made by medical science during the last few decades. Many epidemic diseases have completely disappeared from various countries. We have learned a lot about the structure and intimate functions of the human body—we can open and repair a heart; we are trying to transplant kidneys; we are learning about the structure of viruses and the etiology of cancer. But, unfortunately, we also know too well how little we know. Too often we stop helplessly before the disease and death of our patients. Sometimes we are even blamed for the slow progress of our science, or told that we lag behind the recent developments in such fields as mathematics, physics, or general technology. We are reminded that engineers have split the atom, constructed space ships and electronic computers, built huge factories, ships and airliners, while we “cannot even cure a simple common cold.”

Of course such an opinion is cryingly unjustified. Technical science has developed from simple facts and instruments into much more complex ones; but medical science, on the contrary, has always had to investigate the human body—the most complex “black box” mechanism of Nature.

For centuries physicians were present only at the final, broken-down stages of this complicated mechanism, and we were unable to penetrate either physically or by thought into the minute structures of the body. Only

Photograph depicts several types of sutures used in the mid-18th century, made of soft leather sewn together with silk thread. A History of Medicine, by Jean Starobinski, Hawthorn Books, Inc.





now, armed with experience and the most advanced technical instruments, we are beginning to do it. Since the magnitude of the problems in medicine today is so great, the problems and mysteries of cardiovascular disorders, malignant tumors, viral and bacterial diseases, metabolic failures, immunological reactions, genetics, and many other medico-biological problems cannot be solved in a particular medical institution or country. Rather, if medical scientists of different nations would combine their efforts in research, we could achieve not a simple summation of our forces but a synergistic multiplication of them. Already we have increased our knowledge of each other's work, and have combined forces to make a number of positive advances. One good example that comes to my mind is the work done with the polio vaccine.

Until recent years the incidence of poliomyelitis in the Soviet Union was relatively small, but in 1957-1958 it rose rapidly in some communities. A group of Soviet scientists, headed by Professor M. Chumakov of Moscow, were sent to the United States to study the methods of combating poliomyelitis, and in particular, immunization against it with the Salk vaccine. However, upon arriving in the USA, the Soviet group, although very favorably impressed with Salk vaccine, became more interested in the vaccine from the attenuated poliovirus suggested by Dr. Albert Sabin of Cincinnati. M. Chumakov, A. Smorodinzev, and others studied the Sabin virus very carefully and proved beyond doubt its safety and effectiveness, as well as the added advantage of its low cost for mass production. Certain laboratory and clinical tests were made and in 1959 the live polio vaccine was used in certain areas of the Soviet Union for mass immunization of children. By 1962 the campaign had been so enlarged that about 90 million people had received the Sabin vaccine. Results of the vaccinations were discussed at a joint Soviet-American conference on poliomyelitis in 1961. Later the Sabin vaccine was approved in the United States and it is now widely used everywhere.

The pioneering work of Professor V. Filatov of Odessa on transplantation of the cornea is well known everywhere, and so are the daring experiments of Drs. Sergei Judin and Vladimir Shamov on transfusion of cadaver blood, and of Drs. V. Demichov and A. Lapchinsky on the homologous transplantation of the heart, lungs, and extremities. A large number of foreign specialists, including many American physicians, have visited their laboratories and observed experiments. This has stimulated interest in the problems of using cadaver blood, tissues, and organs in experimental research as well as in clinical efforts.

When Dr. Samuel Rosen of New York arrived in Leningrad in 1957 and demonstrated operative treatment of otosclerosis to the participants of the USSR Otolaryngological Congress, his method was met with great interest and since that time it has been used very widely and effectively in various medical centers of my country.

Today not only the scientific publications but the general ideas and personalities of such men as Paul Dudley White, Michael DeBakey, Albert Sabin, Irving Wright, Samuel Rosen, John Heller, and many other American scientists are very well known and popular among Soviet physicians and investigators. Equally well known to American people in medicine are the names of men like Nikolai Blokhin, Alexander Bakulev, Boris Petrovski, Lev Zilber, Leon Shabad, Alexander Mjasnikov, Victor Zdanov, Michael Chumakov and others. And of course, everybody knows of Dr. Boris Egorov, Jr. — the first medical ambassador to carry out his duties in outer space.

The importance of international cooperation in the field of medical science is obvious, but is the present cooperation really keeping pace with the demands of the times? Can we do something more to promote it for our mutual benefit? I think it is worth thinking about.

A number of important steps have already been made. In 1959 the governments of USSR and USA signed an agreement on the development of cultural and scientific cooperation between our two countries, and since then exchanges in the field of medicine have become more frequent. The agreement has been extended twice, in 1962, and again in 1964. Also, in accordance with the agreement, both governments favor the development of cooperation between Soviet and American institutions conducting research in the fields of cardiovascular and rheumatic diseases, viral and infectious diseases, as well as in other specialties.

There will be more joint Soviet-American conferences on the modern problems of medical sciences held alternately in both countries. This year Soviet specialists will study American work in the fields of genetics, renal pathology, and viral diseases in children, as well as sanitation in large cities, allergy, antibiotics and the health services of such places as Alaska. American delegations will study the sanitation in big cities in the USSR, health services in the Arctic regions, planning of hospitals and maternal and child care, medical information and hemorrhagic fevers. Scientific articles should be published more often in the medical periodicals of other countries, and an exchange of books and journals between Soviet and American institutions and libraries should be promoted.

Because I have been living in New York for the past two years, I have had the unique opportunity of meeting almost all the Soviet medical delegations and specialists who have visited the United States. I learned their impressions of American medicine and literature. Naturally, not all of them were favorable or ecstatic. However, they did draw very important conclusions from their visits, made friends with many people here, and envisioned plans for future investigations. Every one of them felt that such exchanges were very useful and important. Similarly, I have met a number of Americans who have visited the Soviet Union, and they found such visits instructive and useful. They did not understand or like everything in the Soviet Union, but many of them

learned not to blame or discount everything they saw simply because it was not similar to the American pattern.

I believe these are the first steps to mutual understanding and mutual respect and cooperation.

It is a truism that physicians serve the patients and exist for their benefit, not vice versa. Therefore, I wonder what is the good of having the most sophisticated science or the highest standard of hospitals and other medical facilities if they are not available to everyone, or if the disease becomes not only a pathological problem but also a financial tragedy for the patient?

I have talked to many physicians and laymen here and have read many articles, so I do not understand those who assert that the United States has the best possible system of health services for the population and that it is "second to none in the world." Having read the messages of both President Kennedy and President Johnson on the health of the aged and other materials on hospital's and outpatient care, I see this as, at least, "a slight exaggeration."

In order to know what methods of medical care are being provided in the modern world, it is necessary to study all existing systems of public health services and to compare methods of operation and their results. While I am not going to criticize your health services or try "to sell" the Soviet, British, or any other system of medical care — because it is you who will decide the future of medicine in this country — I do want to stress my belief that nobody can relieve the medical profession of its responsibility to the nation as a whole.

Soviet medicine could extrapolate from your ways of organizing physicians' work and of documenting medical information simply and efficiently, as well as your ideas and designs for hospital construction, and for the manufacture of medical equipment, instruments, and drugs. On the other hand, American medicine could learn from the USSR principles of providing comprehensive medical care to all groups of the population, and of making preventive medicine the foundation of modern medical care, particularly in relation to mothers, children, elderly people and various groups of workers subjected to professional or other work hazards.

We have different educational systems, and a comparison of them would be beneficial to both countries. I have visited several medical schools in the USA and I am really impressed by some of them. But it should not be forgotten that your medical schools graduate about 7.5 thousand doctors every year, whereas your country needs at least 10.5 thousand annually in order to keep the present ratio of physicians to population, which is already less than in many other countries. Soviet medical education is able to train more than 24 thousand physicians annually. In 1913 we had only 23,000 doctors in all of Russia; now we have 500,000 for the 225 million population.

Through a careful study of the different methods in both countries, I believe we might find the answers to some very important questions, such as:

What is the optimal ratio in numbers of physicians to population if we use all modern methods for organizing and facilitating our work?

What is the best, most efficient way to prepare the undergraduate student for his future profession? What is the best way to expose him to knowledge without overloading his brain with unimportant information?

How can we ensure the constant and uninterrupted improvement of the practicing physician's qualifications?

How can we provide the best care for the patient in the hospital and combine with it research in the university laboratories and training of students?

There are many other problems that may be solved, and a lot of benefits may be derived for the people of both countries; if we learn from each other and use all the positive experiences in the best interest of our own nations.

Three billion people of different nationalities, races, and creeds inhabit the earth. Many of them live in underdeveloped areas. They are deprived of modern comfort and culture as we know it. They are prey to diseases long forgotten in the more developed countries. They never have enough to eat, cannot educate their children, and the struggle simply to survive is an overwhelming, day-to-day challenge.

Only about 15% of the world's population live in countries where the infant mortality rates are between 16-30 per 1000 newborn children, while 80% of the population live in countries where the mortality rate is between 60-150 per 1000 and where 50% of the total mortality falls on children within their first five years. In developing countries, if the death rate in children during the first year is ten times as high as in the developed countries, then the death rate among children from 1-5 years is 30-40 times as high. This is mainly due to malnutrition and to diarrheal and parasitic diseases. The World Health Organization estimated that in 1963 there were still 10 million cases of leprosy, 4.5 million cases of yaws, 400 million of trachoma, 200 million of onchocerciasis and 200 million of filariasis.

Even though we have achieved better standards of health in our own countries, we should consider the problems of other nations. In the preamble of the constitution of the WHO, signed by many countries in New York, in July 1946, it said:

Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity.

The enjoyment of the highest attainable standard of health is one of the fundamental rights of every human being without distinction of race, religion, political belief, economic or social condition.

The health of all peoples is fundamental to the attainment of peace and security and is dependent upon the fullest cooperation of individuals and States.

The achievement of any State in the promotion and protection of health is of value to all.

Unequal development in different countries in the promotion of health and control of disease, especially communicable disease, is a common danger...

If the medical profession cannot understand these problems, who can? But can we simply wait until the developing nations find their own ways of solving health problems by repeating our own century-old mistakes? The answer is obvious — we cannot stand aside or run away from this responsibility even though the solution of serious problems asks for serious work.

It is vitally important to the development of medical science and to physicians everywhere that nations have peaceful relations, since these relations determine our ability to mutually exchange ideas, information and experiences in research and practice. Without peace we cannot function at our best or ever hope to attain higher standards of health and medical care for the world. We can also exert a definite influence on the public and politicians of our own countries by continuing to develop international contacts. We understand each other at medical meetings and conferences without any difficulty, so why cannot we do even more to improve mutual understanding between peoples?

Physicians can and should explain to political leaders and the public the detrimental consequences of a thermonuclear and biological war and the known deadly influences of radioactive irradiation and fallout. Only through better understanding and peaceful co-existence between nations with different political and social structures is prevention of a new world war possible. It is especially important that the Soviet Union and the United States develop mutual understanding and friendship, because our two countries bear the greatest responsibility for preserving peace. If there should be war we are both capable of destroying each other and of bringing disaster to the rest of the world. Therefore, I feel one of our most important responsibilities is to ensure that the yet unborn generations will live after us. If we fail to meet this responsibility, all our nice words about humanity may simply burn up in the blasts of the thermonuclear catastrophe.

Psychological and psychiatric observations already have shown the dangers of individual and mass war hysteria. It is disquieting to think that one day the fate of all mankind might be placed on the dependence of a breakdown of a pilot in a plane with atomic bombs on board, or of the radar officer who might mistake the ducks for enemy planes, or the commander of a nuclear submarine on patrol who could not be reached by radio after the order to attack the "enemy" had been found to be erroneous.

The film "Dr. Strangelove" is not a comedy, it is a sad warning to everybody.

Ivan Pavlov once said that war is a brutal and animal way of attempting to solve human problems and that it should disappear from the face of the earth. Today we can only repeat those words with all possible strength.

BIOLOGY'S HUNT IN THE WAKE OF THE WHALE

by Roger P. Atwood, M. D., and Gerald D. Rogell '67



To the right is Capt. Jonas of Hvalur 5, host and help to the authors in their project. Left, below, floats the head of a Sperm whale secured alongside; scratch-marks on its face and eyes were inflicted by other Sperm whales.



The mountain Thyrrill, whose name means "turbulence" in Icelandic, commands the head of Hvalfjördur, "the whale fjord." Its ragged bulk, jutting out into the old glacial slash that forms the fjord, seems to provoke the north wind to the frequent rages that we later came to call the "Usual Hvalfjördur Hurricanes." On July 21, 1964, the forbidding dawn of our first whaling voyage, this wind growled and snapped at Thyrrill as if to erode it still further and swept down on us as we stood at the whaling station and pier.

Our arrival in Reykjavik, Iceland, by air five days before coincided with the unloading of a ship that had carried our car, laboratory equipment, and field gear. We had come to Iceland to begin a research project in whale biology, which was supported by a grant from the National Science Foundation. Our objective was to describe accurately the intestinal microbial flora and the serum antibodies of these poorly studied marine mammals, which live in an environment microbiologically different from that of all terrestrial mammals. By going to sea aboard an Icelandic whaling ship, we hoped to collect blood and intestinal contents from whales within a few minutes of death, using aseptic technique.

We had quickly set up our main shore-based laboratory as guests of Dr. Pall Palsson, director of the laboratory of the Institute for Experimental Pathology of the University of Iceland School of Medicine, outside of Reykjavik. One evening before sailing, we (Roger At-

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wood, project director; Gerald Rogell, summer field assistant; and Mrs. Phyllis Robinson, the shore technician) drove down the narrow, rough, and breathtakingly beautiful coastal road to make contact with the whaling station.

To our surprise, the men at the station, who were in continuous contact with the four whale-catcher ships at sea, informed us that our ship *Hvalur 5*, "Whale 5," was expected in at 4:00 a.m., a mere eight hours away. After hurriedly arranging for steam sterilization of our blood collection lances, we returned to Reykjavik to leave Phyllis at her lodgings, collect our gear, and rush back. We reached the dock in the half light of high-latitude dawn.

Huddling alone on the pier with our equipment, we watched the ship grow larger as it steamed up the gray fjord against the fierce northeast wind. As we waited our apprehensions grew; we wondered how the whaling crew would welcome our forthcoming six weeks of trips with them, what kind of people they would be to work with, and above all, whether our carefully designed collection apparatus would stand the test of conditions at sea.

We knew that the fast-approaching ship, which towed two whales alongside the way a terrier drags a rat, would touch base at the pier, leave its catch, take on fresh food and water, and be off to sea again within 20 minutes. This rapid, incessant pace, which begins in mid-May and ends in mid-September, is essential to the economic survival of the whaling company, since its profits must support the idle winter overhead of the company's four 150-foot catcher ships and land factory. Knowledge of this fact caused us a further concern, for the men in the ships are paid on shares of the catch, just

as they were in the days of *Moby Dick*, and the four ships vie with each other for the best season's record. We could well imagine how unwelcome we would become if our work delayed the ship in its pursuit of other whales.

As we stood ready to swing aboard the ship, a young man leaped off the gunner's platform in the bow, shouted something in Icelandic that was lost in the wind, and started down the pier at a dead run. A crisis at the start of our expedition! One of the university student deck hands had crushed his finger only an hour before in the routine lifting of the harpoons onto the gunner's platform. While the runner was fetching a company truck to the pier to take him off, the captain came forward, his face set in distress and concern; it was a face from Conrad or Melville. The gray and silent man was brought on deck and helped off the ship toward the waiting truck. I (Dr. Atwood) was asked to look at the injury, and I confirmed the captain's and mate's impression that his general condition permitted immediate travel to the nearest facility for treatment. The injury was serious, and I told the captain as we boarded the ship that an attempt at repair and grafting would most likely be made, but

Dr. Atwood stands by as first mate Hörður plunges the blood collection lance into a 69-foot Fin whale.



that the finger would probably be lost: we learned later that it was. A replacement from the flensing crew came aboard. The engine room telegraph rang, lines splashed down, and we noiselessly slipped away. A deep throb rose from the Scotch-boiler steam engine, and we left the fjord like a scrap of paper blown down the street by a winter wind, reflecting anxiously on the bad omen this unfortunate occurrence had created at our first meeting with the 14 men of *Hvalur 5*.

We soon learned that our apprehensions were unfounded. The atmosphere in the ship was like that of a mature group of close friends. We were assisted in every possible way, enthusiastically and ingeniously, quite as though we were aboard a research vessel, and we formed cherished friendships in those few weeks. As is the custom in Iceland, everyone was addressed by his first name, and officers and men ate at the same table. Between watches, at leisure, and while heading in or out, the men read the newest stack of back newspapers, smoked, played cards, or talked, with mutual respect and complete disregard for rank, about anything from NATO policy and the Goldwater candidacy (which was universally bemoaned and deplored), to the latest reports from the herring fisheries.

The captain Jonas Sigurdsson had gone to sea at 13 as a cook's helper and at 15 became a stoker in a coal-burning steam trawler. He described those days of unbroken six-hour watches shovelling coal as "not work, but a devil's punishment." This kindly, scholarly, iron man rose to command various Greenland trawlers and to become one of the first Icelandic whaling captains and gunners when the company was formed shortly after the Second World War. Two years ago he was appointed headmaster of the impressive Navigation School in Reykjavik, where he and the first mate of *Hvalur 5* teach from September to May.

We were settled in our bunks and in what seemed like a few minutes the cook's helper, Jonas' 14-year-old son, shook us gently and said *matur*, "mealtime." We tumbled out for a hearty breakfast of *skyr*, a sour cream



*The climax of the chase —
Jonas is about to fire the
harpoon gun.*

pudding; blood sausage; and whale blubber pickled in sour milk, which is known as *rengi*. We received some smiles of approval for sampling the *rengi*, but we ate only a polite minimum, as the ship's stanchions were rolling under. The main meals, which were also superb, included a variety of fish dishes, braised Icelandic lamb, and delicious lean whale steak with gravy and onions, served with native hothouse tomatoes and cucumbers and followed by hearty vegetable soups, as well as a curious sweet soup of the Norwegian whalers, made from a hot infusion of dried fruits.

In the afternoon, as the ship steamed northwest, we descended into the hold with Hörthur, the stocky, powerful first mate who was one of the few men aboard who spoke no English. After opening the tightly-sealed crate in which our blood collection lances had been sterilized, we indicated to Hörthur how our system was to work. He was the one who would drive the lance into the whale's thorax at the location we had designated in the region of the heart and great vessels. The lances were long, thick-walled, stainless steel pipes that were bevelled and sharpened at the tip and fitted with a full length stylus, like gigantic lumbar puncture needles. Blood would be aspirated through the lance by means of a length of autoclaved, flexible, plastic tubing and delivered to conventional blood bank bottles on the deck. The tip of the lance was sheathed by a short length of aluminum pipe sealed over the lance tip by a rubber cap and sealed against the lance shaft by a wide rubber band. The lance was steamed with its shield *in situ*. At the moment of impact upon whale skin, the cap of the watertight shield would be penetrated by the lance tip so that the advancing bevel of the tip, as it emerged from the rubber shield, would enter the skin dry, even though the puncture site was under water or awash. Hörthur indicated approval of the system but also predicted that the stylus would be difficult to handle under any but calm conditions. He was correct. After the first trip we shortened the lances to six feet, removed the stylus, substituting an occluded lumen on the bevelled tip to prevent tissue from plugging the lance, and drilled numerous small aspirating holes around the tip.

Our system for the aspiration of stool specimens was simpler. We had ten-foot rods of $\frac{1}{4}$ inch steel which had been bent at the tip into a u-shaped curve like that of a sharply crooked little finger and at the other end into a loop handle. Just before use, the u-shaped crook would be sterilized with a blowtorch and allowed to cool. The end of a 25-foot length of sterilized tubing was seated snugly over the crooked end of the rod but not clamped there in any way. This assembly would then be inserted to its full length through the anus of the dead whale. We would free the tubing of its attachment with a sharp tug, leaving it eight or nine feet inside the whale's colon. A sample of the porridge-like stool would be aspirated up the sterile tubing, collected, and taken below for immediate bacteriologic workup.

As we neared the whaling grounds, the appearance of several large icebergs broke the monotony of the 20-hour outward-bound passage. To the northwest the white line of the Greenland ice pack soon became visible, and a lookout was posted in the crow's nest. The helmsman left the protected bridge for the higher, more exposed upper-deck wheel, where he and one of the mates watched for the first distant whale-spout.

Early in the season and just under the Arctic Circle, the summer sun allows hunting around the clock. On our first trip, whales were sighted at midnight. Instead of the cry "thar she blows," a clipped, metallic conversation over the intercom connecting bridge and crow's nest announced the sighting of the first whale. The engine-room telegraph clanged stridently and the ship quivered under the fastest speed it could make. This increase in vibration was subtle, but by the end of the summer it could wake us out of a sound sleep.

The hunt is an almost even contest between whale and man. The big Fin whale and smaller Sei whale have a slight advantage in speed but they soon tire. The unsuspecting nature of the whale is to the ship's advantage, for it is often unaware of the whalers until a harpoon is lodged in its spine. But the whale can retaliate by diving for 30 minutes to an hour, depending on the species, and



Left, at the cutting platform Dr. Atwood inspects the bisected eye of a Fin whale. Right, Gerry Rogell '67 poses at the harpoon gun while the ship docks to leave its catch.



the whalers have no way of locating it except when it surfaces. The chase consists of 20- to 40-minute sprints, during which the whale breathes three times a minute with a tidal volume of some 2,000 liters, and we race toward the spouts. Then, having built up its oxygen reserves, the whale dives, while we lie-to and anxiously scan the sea. Another blow is sighted, and we wheel about in pursuit. This pattern may repeat itself for hours over miles of open ocean; we may be nearly upon it for a shot when it dives again. Or fog, darkness, or heavy weather may supervene and it escapes.

When the chase begins, Captain Jonas mounts to the upper bridge to direct the pursuit. As we close on the whale, he runs forward on a special catwalk to the gunner's platform to man the harpoon gun. The whaler's weapon is no longer a hand-thrown spear; it is a Svend-Foyen gun that fires a 150-pound steel harpoon bearing an explosive head with four large barbs that spring outward inside the whale's body. The harpoon trails a one-and-a-half-inch thick nylon line which is spliced to a one-mile length of 2-inch manila rope stored below deck. The line is paid out by the massive steam winches on the fore-deck through a block in the bow. In his diary Gerry has related his view of the first capture:

A sharp explosion woke me abruptly at 2:00 a.m. and a reflex I never knew I possessed sent me groping for slicker and sea boots as I scrambled on deck. The harpoon gun had been fired. On the bridge, Roger told me we had been chasing whales for two hours. In the eerie light of the sun low on the horizon, we could make out the taut line running out and hear the groaning of the winch brakes. The whale, a 64-foot Finback, was not killed by the first harpoon, but ran off with almost all the rope the ship had. Now and again we could see him blow in the distance.

There was a smell of burning rope and the huge steam winches strained and ground continuously, now reeling in, now paying out, as the second mate on the winch brake played the whale. Roger and I prepared our equipment, working feverishly. This was our first whale, and we didn't know that it would be nearly two hours before the whale was dead. A second harpoon hit it, but it was still alive. Slowly it was pulled in, swimming and blowing, under the bows of the ship. A third harpoon was fired but the explosive grenade in its head failed to explode. The fourth harpoon ended the animal's struggle. Brought alongside, it was inflated with air to provide buoyancy and later, after we had obtained our stool specimen, it was injected with 55 grams of tetracycline to retard bacterial spoilage. A chain was placed around its tail to tow it back to port. The captain signaled that it was our turn for action.

The first mate, Hörthur, plunged the lance into the thorax at the point we had designated. I opened the vacuum flask valves, and the dark red blood immediately flowed into our sample flask. Success!

Moving to the caudal area, we inserted the sterile tube and aspirated an uncontaminated stool specimen. Elated that both systems had worked well, we put the blood in the ship's refrigerator and retired to our makeshift lab in the fore-castle to culture the specimen. Since we had to use several dilutions on a variety of media for aerobic and anaerobic growth, this took over two hours. It was past 7:00 a.m. when we dragged ourselves off to sleep — at least between captures.

With the whale secured alongside, the hunt resumed and a Sperm and a Sei whale were quickly captured. Spirits were high as we began the 22-hour return to Hvalfjörður, for the ship had reached the International Whaling Commission quota. It is sometimes necessary to steam back with only one whale, since regulations dictate that each whale must be at the cutting platform within 30 hours after death.

The ship docked at 1:00 a.m. and we left for the laboratory, our cultures carefully packed and the blood specimens on ice. By the time we reached the lab an hour and a half later, the first whale had been hauled onto the cutting plan and processed. The blubber is stripped off by steam winches and boiled down for its oil,



to be used as an excellent lubricant, a margarine ingredient, and a base for cosmetics. Much of the meat, which tastes like a delicious mixture of beef and venison, is a staple in the Iclander's diet. Bones, viscera, and the meat of poorer quality is either fed to furbearing carnivores or processed into a high-protein, diet-supplement meal for cattle and poultry.

In Reykjavik we awakened Phyllis and started work. The blood was cultured and centrifuged and the serum was decanted and frozen. Since our time in Iceland was precious, we performed only quality control electrolyte assays on the serum. During our subsequent trips Phyllis was to be "picking" and sub-culturing the bacteria for later identification. Miss A. Kathleen Daly, head bacteriologist at the Boston City Hospital, came to Reykjavik to assist her with this as consultant to the project. The work is being continued in the Channing Laboratory at the Boston City, where the bacteria are now being typed and the serum antibodies assayed. The results thus far indicate that the bacteria in the whale's stool is remarkably scanty, numbering no more than 2×10^6 per gram and consist mainly of streptococci similar to enterococci, several *Clostridium* species, and a smaller number

of non-coliform gram negative bacilli. Surprisingly, the serum does contain bactericidal antibodies against a test strain of *Escherichia coli* and other *Enterobacteriaceae*, in spite of the absence of a coliform flora.

This pattern of the dash to Hvalfjordur to board the ship, the trip out, the chase, capture, collection, return, and before-dawn laboratory work soon became familiar, but never routine. The hospitality and good-will of everyone in the whaling company, the manager Loftur Bjarnasson, Captain Jonas, and the crew of *Hvalur 5*, constantly encouraged us and did much to make our work successful. They and our other friends in Reykjavik solved several problems for us, often suggesting the very alternatives we had rejected because of the possible inconvenience to them.

In both the land and the people there is freshness, strength, and vigor. The same geologic forces that formed the earth are still very much at work in Iceland. Erosion has not yet effaced the flow lines of the many lava beds. Natural hot springs provide heating and hot water for the cities, yet more of the land is covered by glaciers than by farms. Only a year ago a volcano erupted in the sea and extended the country's territorial limits by several miles.

The Icelanders, who are descendants of the Vikings, have the hardiness of their ancestors, the liberal traditions of a nation whose parliament is the oldest in the world, and a 1,000-year-old literature which is still being read by any schoolchild, so little has the language changed. At the same time they possess the exuberance of a frontier country, since they achieved independence from Denmark in only 1944 and are just now beginning to realize their own potential. Our departure was softened by our determination to return to this fascinating country: Dr. Atwood for further research, Phyllis as a tourist, and Gerry for clinical training.

On the ramp to the cutting platform lies a 72-foot Fin whale. Extending out of the abdominal cavity, which has been opened to cool the carcass and retard spoilage, is a 13-foot fetus.



WHERE
are
our
WOMEN
in
SCIENCE?





by Ruth B. Kundsins, Sc. D.

Prejudice is covert behavior that cannot be aired, evaluated, or exposed. It springs from emotion and elicits an emotional response. Although it may be recognized by the victim, it cannot be revealed because it is intangible.

Discrimination on the other hand is overt, can be discussed objectively — as the number of individuals employed, dollars earned, positions held; and therefore is considered a more acceptable approach in any discussion.

It is my contention that women in the United States have been victims of both prejudice and discrimination; the women in science more so than others.

Striving for a career in predominantly masculine professions is not as rewarding for a woman, psychologically or socially, as it is for a man. She is not recognized for her achievements but singled out and observed as an oddity. Her energies are of necessity directed toward trying to act appropriately in any situation: not too feminine, nor too masculine, not too dedicated, nor too relaxed. Because she is frequently the lone female in a professional gathering, she feels that she represents her whole sex and with this responsibility in mind, endeavors

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to divine what is expected of her. Since there is no pattern of accepted behavior, she will be criticized whatever she does, not only by men, but women as well. David Riesman has pointed out that women who lack the courage to launch out into satisfying careers of their own will bitterly resent and envy the ones who do.

The woman in science is, therefore, at a distinct disadvantage. The more highly accomplished she is, the greater the resentment from ancillary personnel, particularly of her own sex. If she has a sprinkling of Harlowian traits, her male colleagues are flirtatious. If she looks like a benevolent moose, they are merciless and their appraisal of her appearance takes precedence over what she has to say. The emotional reaction sensed by both sexes impedes her acceptance as an equal, an independent scientist, unreservedly, unselfconsciously. Her surroundings are, therefore, not conducive to complete development and maturation of her talents. If she does do good work, she does it despite a critical if not outright hostile environment.

Betty Friedan's *Feminine Mystique*, whose similar conclusions recently elicited such a flurry of controversial excitement, is only one expression of the growing awareness of the neglect of the talents of women in our American society. Statistical confirmation of her generalizations can be found in the more quietly objective studies of the President's Commission on the Status of Women, the essays in the spring 1964 issue of *Daedalus*, and the symposium of bright minds organized by the M.I.T. Women's Student Association in October, 1964. All are in accord that the intellectual capacities of half of our population are being wasted.

Throughout history, raising children has been incidental to family living. In agrarian cultures the woman worked side by side with her husband in the fields. Infants were brought with them and propped up against a haystack. Older children herded the cattle. Our own pioneer women were partners and active participants in the exponential growth of the nation. But now, for the first time in the recorded history of the world, American women have been relegated by our culture to a full time job of child rearing. Mothers are expected to stay home with small children, and the pressure of convention even extends to mothers of teen-age children.

Although women constitute 34 per cent of the working population, as of spring, 1962, their work is of the secretarial, clerical, or service type, requiring little or no training or experience. They are predominantly young women who have not yet married or older women who have raised their families.

The few women in science or engineering who hold positions in which graduate education is required receive salaries \$2500 to \$3000 less per year than men receive in the same positions with similar training and experience.

Since 1920, the percentage of women holding doctorates has declined in the physical sciences, biological sciences, arts and professions. The only increase has been

in education, in which the number of women holders of doctorates has risen from 15 per cent in 1920 to 19 per cent in 1961. A recent editorial in *Science* observed that the percentage of women in engineering, natural sciences and the social sciences has declined in the period from 1950 to 1960, a decade in which efforts were supposedly being made to utilize the talents of our capable women.

These are the bare statistics. For an explanation, one must turn to the sociologist, Alice B. Rossi, professor of human development at the University of Chicago, who investigated the reasons why so few women go into engineering, medicine, or science. She offers the following observations: a large proportion of women with advanced training are unmarried, and the proportion increases with each degree beyond the bachelor's. To remain unmarried in our American society is unfortunately considered evidence of personal inadequacy. The young girl who is anxious to marry will not, therefore, train for professions in which spinsterhood is the rule. However, studies have revealed that a woman does not become less attractive to men with each succeeding degree that she acquires. She does become more selective in her choice of a mate. A woman with a doctorate seeks an intellectual peer as her life's companion. On the other hand, men with increasing education were not found to be as selective. The women they chose were essentially the same type, whether the men were undergraduates in college or postdoctoral fellows.

In her survey of 3500 college graduates, Dr. Rossi found that women could be grouped in three categories: homemakers, traditionals, and pioneers. The homemakers had marriage as their only career goal. Three years following graduation, 90 per cent were married. The traditionals were women whose career goals were in professions considered predominantly feminine. These were teachers in elementary or secondary schools, nurses, social workers, librarians, or home economists. Two thirds of these women were married within three years following graduation. The pioneers were women seeking careers in occupations considered predominantly masculine: law, medicine, engineering, science, dentistry, architecture, and business management. One half of these were married within the three years after graduation. Since the traditionals and homemakers were found to be quite similar, they were grouped together. The two final categories were characterized further. Their childhood relationships with family and friends differed. The homemaker-traditionals had very strong family ties, enjoyed visiting family and friends, delighted in the company of young children. They considered themselves to be dependent, and socially competitive. They thought that marriage was the most important event in their lives. The pioneers were not as closely attached to family and friends and did not see them as frequently. They did not enjoy the companionship of young children as much and considered themselves to be independent and occupationally competitive. The most important event in their lives was childbearing. The ad-

vent of children meant dependency and occupational compromises.

Nevertheless, both types of women were agreed as to what constituted success for themselves. To be the mother of accomplished children was the primary goal, followed by that of the possession of a prominent husband. As to the question of what kind of women they themselves admired, both types again agreed that they looked up to the woman with scientific or scholarly recognition. This is obviously a theoretical answer to a theoretical question. As I pointed out earlier, Riesman has stated that such a woman in reality creates resentment and hostility.

These pathetic revelations signify that success for all women is not interpreted in terms of personal goals. Success is associated with children and husband. They have ceased to aspire for themselves. They are completely self-effacing, simply a backdrop or scenery for the rest of the family. Apparently, the female spine has wilted like plastic in an autoclave.

Americans have rigid notions as to what constitutes approved occupations for each sex. We consider a male dancer an oddity, a female wrestler or crane operator equally so.

Other cultures do not, however, share this view. A brief visit to the Soviet Union last summer was an opportunity to observe their pattern of life. It was not unusual to see women engaged in occupations which we consider masculine. Fragile girls with bouffant hairdos drove buses and operated gates at railroad crossings, while older women swept the streets with brooms made of twigs. The presence of many women in prestige occupations and the complete acceptance of them were obvious characteristics of Soviet society. This was illustrated by a tour of a hospital, the Sixth Polyclinic of Riga, where the director, a pleasant, sturdy female physician, escorted a group of visitors through the many buildings of the hospital. The department heads we encountered were predominantly women, and we were told that 75 per cent of practicing physicians were women. This was not considered unusual — except by the visitors.

A more subtle cultural difference could be discerned in the male-female relationships, which cannot be evaluated numerically like the numbers of physicians. This was reflected by the complete lack of coyness, giggling, and selfconscious behavior of teen-age girls. Wherever we looked, in restaurants, on the street, or while working together, camaraderie existed between both sexes at all ages. Prominent men spoke of the activities of their equally prominent wives. The director of the Latvian State Virology Laboratory was an attractive mother of three children. Her husband was a plastic surgeon, director of the State Traumatologic Institute. Gay professional and non-professional banter was carried on between these two at dinner. The other guests, male and female, participated equally in the discussion, whether it was about electron microscopy, how to raise children, or where to spend the summer vacation.

A physician present at the National Academy of Science approached me to inform me that his wife was co-author of the English-Latvian dictionary that I was carrying under my arm to avoid linguistic disaster. Husbands and wives expressed great pride in each others' achievements, frequently mentioned their occupation in apposition, "my husband, the professor." Such references might fall strangely on the sophisticated American ear, but they were invariably said with sincerity, not ostentation.

Lillian Gilbreth, the first lady of engineering, has stated her code of ethics: "Our job is to utilize the resources of nature and of human nature for the benefit of mankind, not only must we use these resources, but we must not waste them." Those who have studied the problem are agreed that the talents of our women in America are not being used. It is a tragic waste.

My statistical training does not permit me to believe that male intelligence alone occupies the right-hand side of the bell-shaped curve of I.Q., relegating the female to the left-hand side. The only explanation is that as a nation we have evolved a philosophy similar to the German concept for the role of women; only with typical American ingenuity we have added refinements. Thus "*Küche*" has become gourmet cooking, interior decorating, and the ceremonial futility of housework. "*Kinder*" has become preoccupation with Spock, Gesell, Freud, and sexual fulfillment, while "*Kirche*" is not only church suppers and rummage sales but the constant admonition that "the family that prays together stays together."

I am convinced that the educated woman who optimistically spent her youth majoring in psychology, sociology, or political science is not going to find the full meaning of living in endless P.T.A. meetings, synthetic charities, and church sales. The "Tired Mother" syndrome reported in the *Journal of the Iowa Medical Society* is the result. Because the wife finds little personal satisfaction in her work in the home, she becomes tired, depressed, loses weight, cannot sleep, and eventually finds her way to the physician.

Attitudes are as infectious as the common cold. Submissive, self-effacing mothers who are confused about their own roles in the family and the community are not going to raise pioneer daughters. They will rear submissive, self-effacing daughters who will not become scientists, scholars, or doctors. The growing girl who looks about her for women models for her life goals sees career women only as teachers on the elementary or high school level, occasionally on the college level. Because she does not see women actively practicing assorted professions about her, her goals are limited by what she does see.

Is there a solution? The solution to this problem is obviously as complex as its cause. The core is prejudice and its expression discrimination. Progress directed toward legislating equality is helpful, but superficial and palliative. It attacks discrimination but not the basic prejudice. In order to understand prejudice one must deal with people and their emotions.

Studies of the successful Rossi pioneers in our society — and they do exist — would furnish clues as to the type of family, the interpersonal relationships that lead to extraordinary motivation. The background of the women graduates of Harvard Medical School, an unusually dedicated group, would be revealing.

Masculine help is also necessary. Because women have accepted unquestioningly the standards that men have set for them, almost all masculine understanding and encouragement will be of paramount significance. Fathers can and should urge their bright daughters to continue their education toward goals of self realization. Husbands can put up with the minor inconveniences associated with the working wife and revel in the greater fullness and joy in living that arises from a happy, independent woman who is utilizing her talents completely and arrives home with sparkling, challenging experiences of her own to tell and share.

Couldn't it be that the love of such a woman is a wondrous, exciting experience? Or does the American male ego really need a female slave in residence?

Educators should face the paradox of an educational system that prepares men and women identically for careers that our society limits to one sex.

I have deliberately attempted to write a provocative article on a subject that is real, important, and controversial. No complaint or self-pity is intended. I completely enjoy being a woman, but deeply resent not being offered the same opportunities men have.

The woman currently working in science has met and overcome a mountain of obstacles. She has flouted convention in her goals and her training and continues to do so daily in her occupation. It takes a hardy spirit to stand erect with such a burden.

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Sojourn at **MALAVATE**

by Thomas P. C. Monath '66





Chief Malavate blowing the nose flute.

In quest of specimens an HMS '66 and others paddled their way through the French Guianese interior

With a last orange blink the sun disappeared, and both river and jungle faded into the blackness that arrives so suddenly in the tropics. With the night came cold and an increasing awareness of forest noises. Malavate, a chief of the Oayana Indians, drew close to the ritual fire set in the center of his village. Several other Oayanas joined him while the women remained in the huts preparing parrots, fish, and cassava for the evening meal. A cold breeze off the Itany River shifted the fire's flicker for a moment, illuminating Malavate's round face. He was looking upward.

"Look, Malavate," I said very slowly in French, "*il y a une étoile*, a star that runs across the sky." I pointed to a satellite that was moving swiftly from west to east. Foolishly, perhaps, I hoped to make the chief understand what it was. "The star is made by men far down the river and beyond — boom! They send it up into the sky to circle the earth forever."

Now Malavate pointed at the satellite and drew the eyes of the other Oayana men upwards. He said something very softly in Oayana, pointing all the while, repeating the word "boom!" over and over, and obviously enjoying the effect it had on the other bewildered Indians. Since Malavate was chief, he was older and wiser than the others, and he knew about all such wonders.

Malavate's village, named for him as each Oayana village is named for its chief, is the farthest settlement up the river separating French and Dutch Guiana, and is only some fifty miles from the Tumaque-Humaque Mountains and the border of Brazil. During July and August of 1963 our expedition, consisting of nine men, spent several weeks in Malavate and the Oayana villages farther downriver. The National Geographic Society supported us and our major objectives, which were to collect reptile and amphibian specimens for the Museum of Comparative Zoology at Harvard and make a complete



The Oayanas are an innocently happy and langorous people with a charming air of aloof dignity and playful childishness.

photographic record of the trip, particularly of the Indians of the interior of French Guiana. Both aims were fairly well accomplished. The Indians were cooperative about being photographed, and on our return journey home, between Dorlin and La Grève on the Inini River, we succeeded in capturing a new species of a frog, genus *Dendrobates*, and a new race of another frog, *Atelopus*, whose nearest relative resides in Ecuador. The *Dendrobates* is a beautiful creature, black with bright yellow markings that give it the common name *crapaud d'or*, "toad of gold." Although the geology and flora of French Guiana are an integral part of the Amazon region of South America, we concluded that its fauna have never been adequately investigated and contain definite indigenous peculiarities. It almost seemed that species distribution coincided with arbitrary political boundaries.

It was our stay in Malavate, however, that was one of the highlights of the expedition. It took us a month to get there. In a dilapidated DC-4 from Martinique to Cayenne, we flew low over the forests of Surinam and French Guiana, over moonlit, snaky rivers, the sight of which filled us with impatience and expectation, and over a lonely little beacon on Isle Royale, the largest of the

three prison islands, which include the infamous Devil's Island and which have been misnamed the Isles du Salut.

We were a week in Cayenne. It was only after we had assured the Prefect there that our mission was an honorable one and that none of us intended to write deprecating articles about the prisons that we were allowed to travel to St. Laurent at the mouth of the Maroni River and to begin our journey into the interior.

We commissioned two forty-foot *pirogues* (dugout canoes) and a sizeable crew of Bonis to guide us as far as Maripasoula, the last outpost of the *gendarmerie* on the river. The Bonis are descendants of slaves brought to the Guianas between 1800 and 1848 from Senegal, Guinea, and the Ivory Coast. During those years they escaped into the bush to set up villages where they live today much as they did in Africa, retaining their customs, handiwork and language.

Thanks to big rains in May and June, the Maroni was still swollen enough to conceal many of its rocks, and we reached Maripasoula quickly. There we found a fresh crew of Bonis and two smaller *pirogues*, which would handle more easily in the *grands sauts*, the major rapids on the Itany River below the Oayana domain.



They make their own arrowheads.

Malavate is an average-sized Oayana village consisting of only four families. The Oayanas are surely bound to dwindle to extinction within a few years, for in all of Surinam and French Guiana there are only about 200 left. This is a mere handful of what was once a people several thousands strong with a realm that extended well into Amazonian Brazil. What is causing them to die out? In the cold, wet nights they spend fitfully without blankets, malaria and tuberculosis take their toll as do respiratory infections, measles and a host of other "common" diseases brought by occasional visits from white men.

Apart from that, however, the Oayana are killing off themselves. In Touänke, a village downriver from ours, we noticed a family who had clipped their hair short. At night we were awakened by their incredibly despondent dirge, which we eventually learned from one of our Bonis was a mourning chant for their five-year-old boy, who had died a month before. Although it was already obvious from their daily life, it seemed only further proof of how much the Oayana love their children. How disconcerting it was to be told later by a missionary, who had lived many years with the Oayanas and who knew their ways well, that each year they drown several of their infants in the river. The Oayana woman usually gives birth unassisted, lying across a hammock while her infant drops uncere- moniously onto the hard red earth floor of the hut. The father sits stolidly in a corner, and often, it seems, notwithstanding the steady decline of the village population, he decides not to keep the child. In the past year, in the village of Aloïke, some five or six newborn infants, most of them girls, had been tossed into the river.



The chief's son, Vayana, plucking his eyebrows.



Oayana wife strenuously making her cassava bread.

Is infanticide the father's choice alone? Or is he compelled to do it by the chief, the medicine man, or someone else in the village? Does the custom stem from the not-so-distant past, when the Oayana numbered thousands and found it hard to feed new mouths? Do they believe the river claims a sacrifice to some deity? We did not know, nor could our missionary friend answer these questions. That males are less often abandoned than females may be significant. The Indians recognize the dangers of inbreeding, so perhaps since the number of eligible bachelors is so severely limited, the Oayana fathers may try to partially reduce the danger by eliminating female infants.

Young Oayana men have less difficulty seeking wives than the women have finding husbands. Each year they make an odyssey of several months to the land of their cousins in Brazil. They struggle up the Ouagui River, over innumerable rapids and falls to the headwaters, slash their way through an overgrown trail to another river leading to the Tumaque-Humaque Mountains, and thence to Brazil. It was at the headwaters of the Ouagui that Raymond Maufrais, a young French explorer, supposedly perished some thirteen years ago. Maufrais' rifle and notebook were found by some Oayana men on their annual journey, and tales of a white man living with a tribe of Indians in Amazonia to the south have circulated the

area ever since. Maufrais' father has come to search for his son several times, and in fact had been in Maripasoula just before we passed through it.

In addition to wives, the young men bring back crowns of toucan feathers and strings of red and blue beads, which they consider their only wealth. The prized toucan feathers serve as everyday ornaments, and the chief also hoards them for years in order to make elaborate headdresses used during each season's ceremonial events. One of Chief Malavate's personal qualities that we came to know well was his greed for additions to his store of feathers and beads. One steaming afternoon after a few of our group had returned from a collecting sortie in the bush, Malavate, who had been lazing in his hammock, plucking his eyebrows, suddenly sprang up and began to dance about, wildly gesticulating and making extraordinary faces in our direction. "Poom, poom, poom, poom," he whispered hoarsely, pointing into the jungle behind the village. His keener senses had long before caught the sound of an enormous toucan that had alighted in a tree close by. Malavate wanted me to shoot it, but unfortunately, I had only a revolver with me and could not give the chief a handsome present.

The Oayana language is a relatively simple one with a very limited vocabulary, and of course, it is not written. We tried to make our own functional dictionary, spelling

the Oayana words phonetically. There are, for instance, only four numbers in the language: *pakanatpu*, *hakane*, *ahedowau*. *Ahepitiha omome hapai*, means "the whole hand." Six is *umit etato*, meaning "the finger on the other hand." To count above ten they use their toes.

Like many tribes in South America, the Oayana boys must face a puberty rite — the maraké, which takes place once a year. The boys are subjected to the ordeal of being stung by hundreds of live ants and wasps whose bodies have been woven into an ornamental matting, leaving the stingers exposed. The matting is applied over and over to every part of the boys' bodies. If they cry out, they must face the maraké again the next year.

One could almost envy these warm and jovial people. They are innocently happy and langorous with a charming air of aloof dignity and playful childishness. They paint their skins with a red, sweet, but musty-smelling dye made from the roucou berry, and spend their days quietly contemplating themselves in mirrors which they wear around their necks. They grow some cassava and sugar cane in tiny plots stolen temporarily from the rampant jungle, and they shoot *aimara* and *piranha* with bow and arrow in the shallows of the Itany.

However, we wanted to move on into the central part of French Guiana to continue collecting in the vast forest that stretched eastward towards the Oiapoque River and Anapa Territory. We descended the Itany, whose rapids were now more dangerous as the dry season approached, and went east, up the Inini River to a lonely gold camp called Dorlin. From there we marched for 90 miles through the jungle to a more northerly tributary of the Inini where, by prearrangement, our canoes would

be waiting for us with additional food and supplies.

That 90-mile march through the interior of French Guiana remains uppermost in our memories. We carried our jungle hammocks, collecting equipment, some rice, cassava, and chocolate. In the eight days of our march we were continually forced to reopen ancient trails that had once connected placer mines long since abandoned. At night we found a trickling tributary of some distant river, tied our hammocks and dried our clothes over a tiny fire. The cold, or worse, the screaming troupes of monkeys high overhead, kept us awake. It was a relief to start hacking our way through the jungle again each morning, even on a breakfast of cassava meal.

At La Grève, where we were to meet the canoes, we waited and rested. After a day, our food ran out, and for four days, we spent our time searching for bananas and sweet lemons, feasting on revolting stews of green bananas and taro root. With our few remaining shotgun shells we managed to bring down only one undernourished macaw. We began to feel we had been abandoned, and on the very day we started constructing our own raft, the Boni canoes appeared. The Boni had been forced to axe a passage up the Inini River, which had become clogged with fallen trees through disuse.

Without a rest for our Bonis, we set out for the Maroni River and Maripasoula. The lethargy of our hungry wait at La Grève wore off with the prospects of civilization a few days ahead. Camped along the Inini that night, we gorged ourselves on a howler monkey shot by the Bonis and roasted over our fire. We laughed at the thought of some future weary wanderer arriving at La Grève; perhaps he would make use of our raft.

Other members of the expedition to French Guiana.

The author, Tom Monath, is standing front row, left.



A number of trends have resulted in an increased demand for hospital care in America: the great increase in national income, the widening of individual purchasing power, and the increased medical educational level of the nation at large. The almost total utilization of labor during the war and the immediate post-war years has changed the traditional view of labor as a resource always in excess, and has strengthened the idea that national productivity suffers due to illness in its labor force. War itself, by exposing millions of men to total, modern, and free medical care has increased the national appetite for such service. Finally, organized labor at the collective bargaining table has in the past fifteen years increasingly channeled its demands away from direct wage increments to fringe benefits, which are non-taxable and do not so obviously promote the wage price spiral. These fringe benefits have largely centered on medical care.

If these are some of the factors operating in the area of demand, what about that of supply? What of the charge for medical care in 1964? There is general awareness that it is expensive. The average per diem charge in the urban teaching hospital is roughly \$50.00 and is climbing at the rate of 6% to 7% annually. This article will attempt to examine the changes in medical costs, especially the cost of hospital care, and then try to assess some of the solutions that are now offered to meet them.

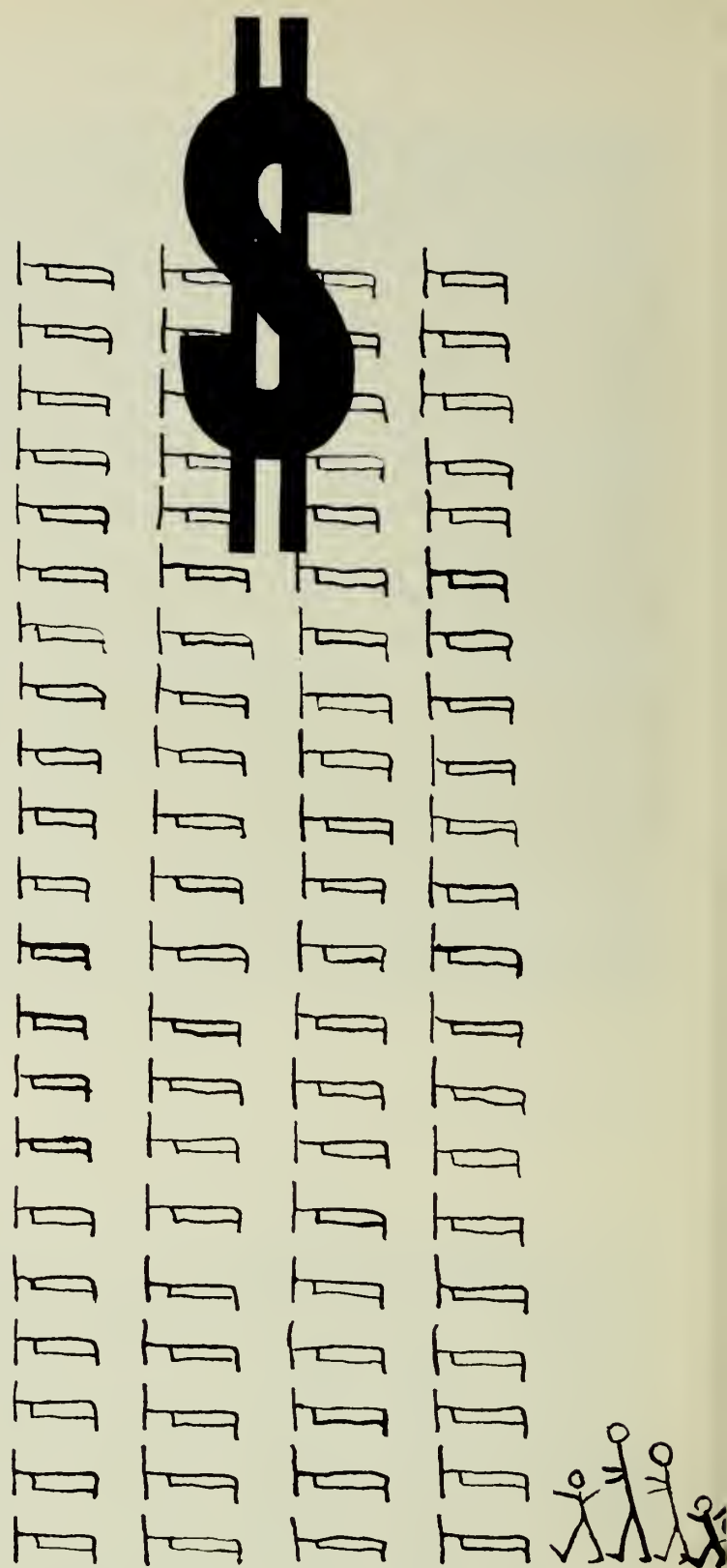
A broad look at the economy in relation to the cost of medical care shows the following disturbing trends. If we take the years 1947-49 as a baseline of 100 in estimating changes in prices for all goods and also the expenditures for medical services, by 1961 all goods had risen to 128.3%, while the cost of medical services had risen to 161.7%. All consumer prices rose only 46% as much as medical expenditures.

Medical care is a service and therefore cannot possibly offset inflationary trends with parallel increased productivity, as is possible in industry or agriculture. It is perhaps fairer to compare the rising cost of medical care to the rise in other services. In the same period, however, medical costs rose 62.3%, and all services by 53.4%.

Taking a broader view of price trends, the consumer price index for selected years between 1929 and 1960 (1947-49 = 100) shows the following trends:

Consumer Price Index 1929-1960

	1929	1940	1950	1959	1961
All Items	73.3	59.9	102.8	124.6	128.4
All Services	—	73.6	108.1	147.5	153.4
Med. Care	73.5	72.7	106.0	150.8	161.7
Hosp. Rates	—	50.4	114.6	208.9	244.8
Hosp. Insur.	—	—	159.4	174.3	189.6



These figures, however, are subject to question. The Bureau of Labor Statistics' figures, as shown in the Consumer Price Index, often fail to keep up with the rapid change in practices and products used in medicine. Therefore, these figures often underestimate the real costs. For example, with respect to drugs, the CPI shows an increase of 35% between 1947 and 1959. However, the drug industry itself admits to a rise of 96%. The indices used do not account for the introduction of new products and their wide utilization, and hence this effect on the total economic picture. The CPI is weighted heavily toward

HOSPITALS Have Become COSTBOUND

by John J. McNamara '65



items like aspirin and milk of magnesia, while obviously more significant spending is occurring for antibiotics and other drugs. The same is true in the estimates of utilization of ancillary services. The medical care price index covered only eighteen items in 1960; therefore it does not measure significant medical expenditures.

Capacity to pay is measured more accurately by the relation of income to price than by a comparison of the cost of living with the cost of medical care. From 1940-1959 the cost of living rose 108%, the cost of medical care rose 107%, but the per capita disposable income

rose 231%. Per capita disposable income rose three times as much as the cost of medical services from 1940 to 1950, and more than twice as much from 1940 to 1959. However, this trend may be leveling off, because in 1960 medical costs rose more than the per capita disposable income.

An examination of changes in trends of cost and ability to pay tells us little about the product paid for. Are we talking about the same thing when we speak of a \$5.00 room in 1930, and a \$25.00 room in 1960? The total expense may not be reflected in the per diem charge. If average stays were 15 days 30 years ago and are now ten days, the total increase in expense has been 333% and not 500%. However, these average shorter stays may represent only hospitalization for less serious illness and obstetrical care. The question is, does the room price per day represent the same product in 1960 as in 1932? Hospital personnel in 1932 averaged out to one per patient. Now the figure is greater than two per patient.

All in all, it seems that methods available for analysis of the cost of medical care are inadequate. The figures available show less of a rise than the real price rise; the increase in the ability to pay may be leveling off and the product paid for is difficult to evaluate. To complicate matters further, although in the free economy it is generally assumed that costs determine price, in medical practice this connection has always been tenuous. The traditional approach has been more from the rich, less from the poor. Also, due to philanthropy, medical prices have usually been below cost, though this factor has recently been declining. Finally, the fact that relatively few hospital managements use modern cost accounting techniques make it difficult to measure costs.

Hospital costs rose 378% between 1940-1961. Two major etiological factors can be singled out. First, there was an increased demand for hospital space and a decreased supply of hospital beds. The reality of the demand is seen in the rise of hospital beds used between 1932-1952. The number of patient-days per year per 1,000 population rose from 827 to 1,210.

A large increase in demand that brings a substantial rise in prices points to a growth in demand not compensated by an adequate flow of services. The crisis in the hospitals has been to some extent due to the availability of hospital beds. After the war a large deficit in the number of available and acceptable hospital beds became readily apparent. The depression and the war had been responsible for a very low level of hospital construction.

In August, 1946, Congress enacted the Hospital Survey and Construction Act which established the Hill-Burton Study. This study dramatized the shortage of beds

and estimated that 875,000 more beds would be needed.

The greatest factor in the rise in hospital costs has been the increase in use of professional services. *Medical Economics* reports that doctors in 1961 ordered six times as many tests as in 1930, and twice as many as in 1945. In New York State between 1947 and 1957 \$120 million of \$194 million in increased costs was associated with increased professional services, exclusive of doctors' fees. In that period the number of employees per patient rose from 1.48 to 2.11. Payroll expenses increased by 92% in New York. Even though the national average for hospital salaries continues to be low, under \$4000 per year, it still represents greater than 60% of the hospital costs.

Some upgrading of pay scales has also occurred, especially for trained personnel. An example of this is the change with respect to nurses. Between 1945 and 1952 nurses' hours declined from a 47-hr. week to a 43-hr. week. Their average monthly salary rose from \$155 to \$233. The number of hospitals providing full maintenance fell from 52% to 16%, and payrolls increased 153%.

Perhaps the most significant cause of the cost rise is the burgeoning complexity of medical care, with its concomitant price tag. How are costs being met and have the methods for financing such costs excluded any segments of the society from their right to health?

Undoubtedly, the most significant development in the past thirty years in the area of hospital costs is the ready acceptance of the insurance principle by the public and, at least in part, by the medical profession. The idea that the occurrence of sickness constitutes an insurable risk, and that the cost of sickness in the community can best be handled by distributing this risk in some way over a segment of the population, is an innovation of the depression. Insurance plans have fallen into two broad groups: "government" plans and "private" plans.

The most forceful attempts to finance health care by Federal monies came during the 30's and just after the war. On January 17, 1935, Franklin Roosevelt sent to Congress the report of the President's Committee on Economic Security that became the basis for the Social Security Act. In it the President endorsed the concept of a compulsory national health insurance. Fearing that to press strongly for this would endanger the whole Social Security program, Congress took no action on the matter.

In 1943, Senators Wagner, Murray, and Dingell introduced the first bill calling for a compulsory national health insurance system to be financed through a payroll tax. No action was taken on this or on subsequent revisions of the bill, although Roosevelt continued to make broad statements about the "right to adequate medical care." On November 19, 1945, Truman proposed a comprehensive health insurance plan to Congress which was to be financed through a 4% rise in the Social Security-Old Age and Survivors Insurance Tax. No action was taken on this either in the subsequent few years; however, in 1949 pressure from organized labor, the AFL and CIO and their presidents, and such liberal groups as the ADA

and the Committee for the Nation's Health who were represented by Eleanor Roosevelt, Chester Bowles, and Robert Wagner intensified; and Truman again called for compulsory national health insurance.

The move was directly and effectively countered by the AMA and its phalanx of supporters, the Blue Cross-Blue Shield Commission, the Chamber of Commerce, the American Legion, and the National Catholic Welfare Conference. No action was taken on the measure, an obvious victory for the opposition.

The reasons for Government's failure in this area are widespread. Perhaps the most significant one is that the need had been reduced by private action in the sphere of financing health costs, especially hospital costs. After the war, the Unions, having already organized heavy industry, found the climate of economic and governmental opinion unfavorable to demands for direct wage increase because of their inflationary effect. Fringe benefits did not come under this ban, and the legality of fringe benefits, especially health benefits, as subjects for collective bargaining was established in 1948 through a series of decisions by the National Labor Relations Board and the Courts. Union demands had come to center more and more on obtaining health benefits for workers, which subsequently reduced the pressure for massive Federal intervention.

These benefits were met by pre-existing institutions: by Blue Cross, child of the American Hospital Association, and second by the commercial insurance companies who were attracted into the health insurance field by the remarkable success of Blue Cross-Blue Shield and the obvious demand for this type of insurance.

Some appreciation of the economic theory underlying these two approaches to hospital financing is essential. Blue Cross-Blue Shield is the direct offspring of the hospitals themselves, and its ready acceptance was undoubtedly made easier by memories of the deprivations during depression years.

In 1933 the American Hospital Association formally approved the prepayment idea and issued its *Essentials of an Acceptable Plan for Group Hospitalization*. These essentials outlined the basis of future Blue plans, and included the main concepts of non-profit organization, prepayment for hospital service, specifically basic hospital charges irrespective of the existing cost, and, though not explicitly stated, the idea of community based rates.

The first Blue plans seemed to violate most insurance principles. They wrote a coverage for which there were no adequate statistics to provide a base line for underwriting. They insured against a hazard that competent actuaries believed could not be predicted. They violated insurance concepts of limited liability by prescribing that hospitals offer service rather than dollar benefits. Since the contracts did not limit the plans' dollar liabilities, and since the cost of hospital service fluctuates, the plans could not measure their liabilities in advance. Also, the first day, first dollar coverage that the plans provided seemed to

give subscribers no financial incentive to avoid becoming ill. Such a practice seemed to encourage use and thereby increase the incidence of the hazard insured against. Finally, in seeking to enroll the whole community at rates that did not reflect hazard differences among the risks involved, the service plans disregarded the concept of insurance equity, that is, the value judgment that an insurance rate uses to reflect the risk insured against.

It therefore seems remarkable that the Blue plans were so successful. Many factors, however, can explain this: the non-profit organization of the plans enabled them to be tax-exempt. The community orientation allowed the plans to enroll an average cross section of a given community, thereby diminishing the need for risk selection. The need for effective prepayment insurance was obviously present. The Blue plans entered an area of great demand, unhindered by competition. Over the next 20 years, until the early 1950's, enrollments of average or less than average risk people continually increased, assuring the plans of a steady inflow of capital. This broad basis in enrollment is undoubtedly the only factor that permits the economic feasibility of the ill-defined limits of a service-type contract. At present, most of the 78 Blue plans still offer service-type contracts, with exception of Massachusetts and Texas, which provide dollar indemnity allowances.

This change in Blue plan policy to dollar indemnity reflects the increase in commercial health insurance plans in the last 15 years. The question of health insurance became the concern of not only the consumer but of management, who paid for the consumer.

Why has this occurred? The Blue plans have one major inherent difficulty which became immediately evident; their community basis tied them to a geographical area. Geographical variations in hospital costs across the country make it very difficult for national firms to provide health insurance benefits to employees under single national contracts. On the other hand, the close financial connection between these firms and the commercial insurance industry, with wide investments in other areas of the national economy, made reciprocity quite natural. Moreover, the use of experience rating by the commercial insurance industry permitted the commercial plans to extend much lower rates to low-risk industry groups, resulting in substantial savings to management. The concept of experience rating is basic to that of insurance equity, namely, the low risk gets the low rate, the rate charged being determined by the experience of the insuring agency with the group insured.

Its financial success is verified by that of commercial health insurance itself. In 1948 the public spent \$862 million on it; by 1960 it was paying \$5.8 billion.

Correspondingly, the unique approach of the Blue plans has changed, and at present it is in many ways indistinguishable from that of the commercial insurers. Many people feel the Blue plans have betrayed their public service orientation. As the President's Commission on the Health Needs of the Nation stated in 1953:

There is a basic conflict between commercial insurance principles and the special insurance and medical care objectives sought by those in the Trade Union movement, who are dissatisfied with the present state of affairs. This arises primarily from the operation of the mechanism of 'experience rating.' . . . Experience rating is an insurmountable obstacle to the attainment through the voluntary system of the objectives of social insurance, which call for the pooling of risks and resources and the spreading of costs over the widest possible area; so as to permit the full participation of those less favorably situated as well as the preferred risks.

In Michigan, a broadly based community rated Blue plan does exist and it receives the full support of the United Auto Workers Union. Walter Reuther has stated:

While the insurance companies have made a few gestures toward older people, their practice of experience rating has done more harm than any other single factor in keeping satisfactory health insurance out of their reach. . . . Broad risk sharing is an essential part of any serious proposal to deal with the aged. Experience rating is directly opposed to this necessary risk sharing.

This last statement, however, leads us into an area of value judgment that is questionable. Have hospital costs risen so high that we need some form of medicare, particularly for the aged? While it is true that they have risen at a staggering pace, the increment of personal disposable income has largely kept pace. However, hospitals, and especially the large teaching ones, must find some way to solve the problem of unreimbursed costs of indigent patients. At the Massachusetts General Hospital, its director Dr. John H. Knowles' efforts in this area, both in negotiating new arrangements with Blue Cross for the subsidy of these patients, and in his forays into the General Court to increase welfare allowances, are significant and have been chronicled to a greater or lesser degree of inaccuracy in the local tabloids.

Without entering into the subject of the feasibility of financing health care for the aged through social security, I think everyone agrees that the elderly constitute a high risk group from the insurance point of view. Presupposing the existence of experience rating, one can conclude that rates for the elderly must necessarily be high. If, and this needs qualification, the elderly of our country are incapable of meeting such rates today, and if public opinion has come to give health care the status of a civic right, a vacuum exists which needs to be filled. The only question is how.

In his message to Congress in February, 1963, on Aiding Our Senior Citizens, President Kennedy said:

A proud and resourceful nation can no longer ask its older people to live in constant fear of serious illness for which adequate funds are not available. We owe them the right of dignity in sickness as well as in health.

Mr. McNamara originally presented this paper in longer form to the Boylston Society.

EDITORIAL

Some Ways for Hospitals to Alleviate Their Costs

We are now passing through an era of relative darkness in the financing of medical care. This darkness can best be characterized as confusion over its cost: cost to the patient and cost to the hospital. Several factors aggregate to compound the confusion.

1. At the close of World War II, Americans came to consider proper medical care one of their "unalienable rights." This, in turn, has placed a tremendous demand upon the nation's hospitals. Hospitals are being used more than ever before. Babies are no longer born by the dim bedroom light at home. The hospital has in many ways become a place of refuge and security for human beings beset by various ills. And hospital clinics, the focus of all present day emphasis on ambulatory care, are overrun.

2. Countless insurance plans have entered the field of pre-paid medical coverage and are even now still probing this field in hope of setting premium rates and creating benefits that will properly cover the patient and repay the hospital. There is good evidence that these benefits are not keeping pace with modern costs. Hospital expenses are rising as modern medicine becomes more complicated. Personnel, who account for 75% of hospital costs, are increasing per hospital unit as the care for patients admitted to hospitals becomes more intricate and time consuming. Only the "bed-sick" are admitted to the hospital, but countless "ambulatory-sick" swarm to our out-patient clinic facilities in increasing numbers. As Americans, they are cognizant of the importance of health and seek check-ups and evaluation of their varying complaints. Collection rates for in-patients may not be perfect and may lack five per cent or so of being complete, but outpatient collection statistics are far more discouraging and represent a significant proportion of the uncollected services that must be written off by hospitals. The larger a hospital's "indigent" population, the greater will be this uncollected sum.

3. The teaching hospital has some very special problems with regard to cost that are not found in the community hospital. In the first place, a community hospital has a patient population that is centered in one community, that is characteristically afflicted with common diseases, and that can be counted upon for relatively predictable growth. A teaching hospital, on the other hand, gives health care to its local community but also receives patients from long distances with characteristically complicated medical and surgical problems. Many of these problems require expensive equipment and time-consuming use of personnel for their care.

A teaching hospital teaches. Though frequently of immeasurable help in patient care, all students, be they medical students, residents, nurses, radiologists, pathologists, or what, nevertheless represent an expense to the hospital.

A teaching hospital does research. Where there is research, there are bound to be unpaid, indirect costs that must be absorbed by the hospital.

A teaching hospital usually has a significant load of non-paying or partially paying "indigent patients." In the past, philanthropy seemed ready to cover this deficit and hospitals were, in general, unperturbed at reasonable amounts of red ink. But today, although community drives help in part to pay for this charity, the hospital is usually forced to accept a significant number of bad debts.

Finally, teaching hospital costs are high because the quality of their care is so high.

As Dr. John Knowles, director of the Massachusetts General Hospital, has so aptly stated, we are at the present time in a state of disarray, every interest selfishly fighting for its economic share. And he is most correct when he states

that both the patient and the hospital take much of the punishment that results from this discord. Private insurance company plans, Blue Cross plans, government medical health plans, union health plans, various politicians' and doctors' plans for health insurance all vie for acceptance, while patients and hospitals alike appear to take the brunt of the disorder. It is high time that hospitals begin to produce strong spokesmen for their cause. Until recently, they have suffered from ineffective representation. And until recently their administrations and staffs have paid little attention to up-to-date cost accounting and cost analysis in our hospitals. Clearly a more accurate analysis of hospital costs will allow a more realistic insurance policy to be developed to cover these costs.

Events now demand that both the hospitals and doctors do some careful thinking concerning the cost of health. It seems to us that America's changing health habits demand a change in hospital management and in the philosophy of patient care. As our nation becomes more and more involved in ambulatory care and as our patients rally quickly from serious medical and surgical ills, one possible solution to the problem of hospital costs might be the development of what is now being called a low-cost "half-way house." Here the post-fracture orthopedic patient or general surgical cholecystectomy patient may go within a few days of his operation or original acute illness to convalesce. Here "diagnostic" and chronically ill patients may be studied. In such a "half-way house" personnel (nurses, technicians, and doctors) and equipment can be kept to a strict minimum. Under such an arrangement, hospital costs could be impressively lowered and more easily balanced by insurance income. While a convalescent type of care is being given in such an area, the associated main hospital would be free to handle many more acutely ill patients in its setting of expensive modern equipment and large numbers of trained personnel. For this sort of care, with its greater demands on equipment and personnel, a greater charge should be made. Insurance policies could be so devised that each kind of medical care, convalescent or acute, would receive an appropriate amount of coverage.

Finally, we may berate the hospitals for outdated cost analysis and failure to clarify their financial position; and we may berate government, and private or non-profit insurance plans for their failure to keep pace with rising hospital costs, but doctors and nurses must be educated at some time in the course of their training to the concept that they have a vital part to play in helping to solve the hospital's problems. Perhaps this is best done at the post-graduate level, when the student first comes in contact with the hospital and its problems. In its very essence, it means that our doctors must play a greater part in social medicine. Phrased differently, our doctors must involve themselves more deeply in the health of both the hospital and the community. Perhaps we have been overly oriented to the scientific aspects of our profession and too dedicated to its research aspects and the intricacies of disease. Perhaps we need to broaden our sights and more clearly view the total situation of the hospital, its problems and its role in broad community health.

Not many years ago, Harvard's President Pusey stated on behalf of the humanities (as opposed to the burgeoning sciences, we presume); "the humanities have a very special place in a university, especially perhaps because of the pleasure they give but also because of the heightened effects which experience of them can produce in individuals in terms of enlivened imagination, increased responsiveness, broadened interest, clarified purpose, and, in the end, also quickened ethical sense."

As we focus down more sharply on our particular disease specialty, it is important for us not to lose sight of the larger more broadly "humanitarian" aspects of community health and its economy.

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Reduce psychic tension

The association of psychic tension and depressive symptoms is fairly common; but therapeutic agents which can relieve one complaint may accentuate the other. With Valium (diazepam) this problem can usually be avoided.

As Valium (diazepam) controls psychic tension, depressive symptoms such as crying spells, feelings of futility, fatigue, insomnia and anorexia also tend to disappear. This dual relief can enhance your therapeutic measures in patients with organic conditions which are apt to have concomitant mixed emotional involvement—such as cardiac diseases, gynecological disorders or illnesses requiring surgical correction. Patients who have failed to respond to other agents may react favorably to therapy with Valium (diazepam). It is equally useful in patients with disorders which are emotional in origin, as well as those who may show a mixture of psychic tension and depressive symptoms as a response to stresses of family or business difficulties.

In prescribing: Dosage—Adults: Mild to moderate psychoneurotic reactions, 2 to 5 mg b.i.d. or t.i.d.; severe psychoneurotic reactions, 5 to 10 mg t.i.d. or q.i.d.; alcoholism, 10 mg t.i.d. or q.i.d. in first 24 hrs, then 5 mg t.i.d. or q.i.d. as needed; muscle spasm with cerebral palsy or athetosis, 2 to 10 mg t.i.d. or q.i.d. Geriatric patients: 1 or 2 mg/day initially, increase gradually as needed.

Supplied: Tablets, 2 mg and 5 mg; bottles of 50 and 500.

Contraindications: Infants, patients with history of convulsive disorders or glaucoma.

Warning: Not of value in the treatment of psychotic patients, and should not be employed in lieu of appropriate treatment.

Precautions: Limit dosage to smallest effective amount in elderly patients (not more than 1 mg, one or two times daily) to preclude ataxia or oversedation. Advise patients against possibly hazardous procedures until correct maintenance dosage is established; driving during therapy not recommended. In general, concurrent use with other psychotropic agents is not recommended. Warn patients of possible combined effects with alcohol. Safe use in pregnancy not established. Observe usual precautions in impaired renal or hepatic function and in patients who may be suicidal; periodic blood counts and liver function tests advisable in long-term use. Cease therapy gradually.

Side Effects: Side effects (usually dose-related) are fatigue, drowsiness and ataxia. Also reported: mild nausea, dizziness, blurred vision, diplopia, headache, incontinence, slurred speech, tremor and skin rash; paradoxical reactions (excitement, depression, stimulation, sleep disturbances and hallucinations) and changes in EEG patterns. Abrupt cessation after prolonged overdosage may produce withdrawal symptoms similar to those seen with barbiturates, meprobamate and chlordiazepoxide HCl.

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